Appendix F, Traffic Impact Analysis - page 478 City of Huntington Beach - DTSP Update Program Environmental Impact Report

CUMULATIVE (2020) WITH PROJECT WITH ALTERNATIVE 2 CONDITIONS (HCM METHODOLOGY) Cumulative (2020) + ProjectWed Jan 7, 2009 09:47:27

Page 1-1

Huntington Beach Traffic Impact Analysis Cumulative (2020) + Project AM Alt with cross traffic

Scenario Report

Scenario: Cumulative (2020) + Project AM (Alt 2 w/cross)

Command: Cumulative (2020) + Project AM (Alt 2 w/cross)
Volume: Cumulative (2020) + Project (Alt 2 w/cross AM)

Geometry: General Plan Build-Out Impact Fee: Default Impact Fee

Trip Generation: None
Trip Distribution: None
Paths: Defau

Paths: Default Path
Routes: Default Route

Configuration: Existing

Cumulative (2020) + ProjectWed Jan 7, 2009 09:47:28

Page 2-1

Huntington Beach Traffic Impact Analysis Cumulative (2020) + Project AM Alt with cross traffic

Intersection		Base Del/ V/			Future Del/ V/	Change in	
# 5 Pacific Coas	t Hwy / 9th St	LO A	S Veh C 2.9 0.597	LC A	OS Veh C 2.9 0.597	+ 0.000 D/V	
π 3 racific coas	c nwy / Jen Sc	Α.	2.5 0.557	А	2.9 0.397	1 0.000 D/V	
# 6 Pacific Coas	t Hwy / 6th St	С	26.0 0.717	С	26.0 0.717	+ 0.000 D/V	
# 7 Pacific Coas	t Hwy / Main St	A	7.7 0.523	A	7.7 0.523	+ 0.000 D/V	
# 8 Pacific Coas	t Hwy / 1st St	E	64.6 1.009	E	64.6 1.009	+ 0.000 D/V	
# 9 Pacific Coas	t Hwy / Huntington	A	8.2 0.639	A	8.2 0.639	+ 0.000 D/V	
# 16 Main St / Ac	ams Ave	В	16.2 0.454	В	16.2 0.454	+ 0.000 D/V	
# 17 Main St / Wa	lnut Ave	A	7.4 0.092	Α	7.4 0.092	+ 0.000 V/C	
# 18 Main St / 0]	ive Ave	A	8.0 0.195	A	8.0 0.195	+ 0.000 V/C	
# 19 Main St / 6t	h St	В	15.8 0.263	В	15.8 0.263	+ 0.000 D/V	
# 20 Lake St / 6t	h St	A	8.3 0.116	A	8.3 0.116	+ 0.000 V/C	
# 21 Lake St / Or	ange Ave	В	12.8 0.570	В	12.8 0.570	+ 0.000 V/C	
# 22 1st St / Ora	nge Ave & Atlanta	С	21.0 0.324	С	21.0 0.324	+ 0.000 D/V	
# 24 Beach Blvd /	Pacific View Ave	A	9.4 0.301	A	9.4 0.301	+ 0.000 D/V	

Cumulative (2020) + ProjectWed Jan 7, 2009 09:47:28 Page 3-1 Huntington Beach Traffic Impact Analysis Cumulative (2020) + Project AM Alt with cross traffic ______ Level Of Service Computation Report 2000 HCM Operations Method (Future Volume Alternative) ************************* Intersection #5 Pacific Coast Hwy / 9th St ************************* 100 Cycle (sec): Critical Vol./Cap.(X): Loss Time (sec): 5 (Y+R=4.0 sec) Average Delay (sec/veh): 2.9 30 Level Of Service: Optimal Cycle: ******************************* Street Name: Pacific Coast Hwy 9th St South Bound East Bound West Bound Approach: North Bound Movement: L - T - R L - T - R -----||-----||-----| Protected Protected Protected Protected Include Include Include Rights: Include 0 0 0 0 0 0 0 0 0 0 0 Min. Green: 0 1 0 2 0 0 0 0 0 0 0 0 2 0 1 1 0 0 0 1 -----||-----|----|-----| Volume Module: 0 1328 23 1834 Base Vol: 12 0 0 0 0 47 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 Growth Adj: 0 1328 12 23 1834 0 0 0 47 23 Initial Bse: 0 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 1328 0 Initial Fut: 12 23 1834 0 0 0 47 Ω 23 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 PHF Volume: 0 1328 12 23 1834 0 0 0 0 47 0 23 Reduct Vol: 0 0 Ω 0 U Ω Ω Ω Ω n n Ω Reduced Vol: 0 1328 12 23 1834 0 0 0 47 23 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 MLF Adj: 0 1328 0 0 FinalVolume: 12 23 1834 0 0 47 O -----| Saturation Flow Module: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 Sat/Lane: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 Adjustment: 0.00 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 1.00 0.00 Lanes: 0 3400 1700 0 0 1700 3400 0 0 1700 0 1700 Final Sat.: -----||----| -----||----Capacity Analysis Module: 0.01 0.54 0.00 0.00 0.00 0.03 0.00 Vol/Sat: 0.00 0.39 0.01 0.00 **** Crit Moves: Green/Cycle: 0.00 0.87 0.87 0.03 0.90 0.00 0.00 0.00 0.00 0.05 0.00 0.05 0.01 0.00 0.00 0.00 0.60 0.00 Volume/Cap: 0.00 0.45 0.45 0.60 0.00 0.29 Delay/Veh: 0.0 1.4 0.8 53.7 1.3 0.0 0.0 0.0 0.0 58.7 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.8 AdjDel/Veh: 0.0 1.4 53.7 1.3 0.0 0.0 0.0 0.0 58.7 0.0 48.2 Α Ε D LOS by Move: Α D Α Α Α 0 1 0 0 0 0 HCM2kAvqQ: 0 5 *********************************** Note: Queue reported is the number of cars per lane. **************************

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Cumulative (2020) + ProjectWed Jan 7, 2009 09:47:28
              _____
               Huntington Beach Traffic Impact Analysis
         Cumulative (2020) + Project AM Alt with cross traffic
                 ______
                 Level Of Service Computation Report
         2000 HCM Operations Method (Future Volume Alternative)
******************
Intersection #6 Pacific Coast Hwy / 6th St
*****************
                100
                               Critical Vol./Cap.(X):
Cycle (sec):
               31 (Y+R=4.0 sec) Average Delay (sec/veh):
98 Level Of Service:
                                                         26.0
Loss Time (sec):
Optimal Cycle:
*******************
            Pacific Coast Hwy
                                               6th St
Street Name:
                                    East Bound
                        South Bound
           North Bound
                                                     West Bound
Approach:
                       L - T - R L - T - R
          L - T - R
                                                   L - T - R
Movement:
-----|----|-----|------|
                                       Permitted
            Protected
                          Protected
                                                     Permitted
Control:
                           Include
                                        Include
                                                       Include
Rights:
              Include
                                                              0
Min. Green:
            0 0 0
                          0 0
                                  0
                                       0 0
                                                0
                                                       0
           1 0 2 1 0
                        1 0 2 1 0
                                      0 0 1! 0 0
                                                   1 0 0 1 0
-----|----|----|-----||------|
Volume Module:
           31 1162
                    74
                        141 1805
                                  23
                                       34
                                           23
                                               23
                                                    73
Base Vol:
                                              1.00
                               1.00
                                     1.00 1.00
                                                  1.00 1.00
                                                           1.00
Growth Adj: 1.00 1.00 1.00
                       1.00 1.00
                                  23
                                               23
                                                            178
Initial Bse:
           31 1162
                    74
                        141 1805
                                       34
                                           23
                                                    73
Added Vol:
            0
                0
                     0
                          0
                              0
                                  0
                                       0
                                           0
                                                0
                                                     Ω
                                                         Ω
                                                              Ω
                     0
                          0
                                   0
                                       0
                                           0
                                                0
                                                     0
                                                         0
                                                              0
PasserByVol:
            0
                0
                              0
                                  23
                                               23
                                                    73
                                                        23
                    74
                        141 1805
                                       34
                                           23
                                                            178
Initial Fut:
            31 1162
User Adj:
                                1.00
                                     1.00 1.00
                                             1.00
                                                  1.00 1.00
          1.00 1.00 1.00
                       1.00 1.00
          1.00 1.00
                       1.00 1.00
                                1.00
                                     1.00 1.00
                                              1.00
                                                   1.00 1.00
PHF Adj:
                   1.00
                                                           1.00
                        141 1805
PHF Volume:
            31 1162
                    74
                                  23
                                       34
                                           23
                                               23
                                                    73
                                                        23
                                                            178
                     0
                                   0
                                       0
                                           0
                                                0
                                                     0
                                                         0
Reduct Vol:
            0
                0
                          0
                              0
                                  23
                                           23
                                               23
                                                    73
                                                            178
Reduced Vol:
            31 1162
                    74
                        141 1805
                                       34
                       1.00 1.00
                                1.00
                                     1.00 1.00
                                              1.00
                                                   1.00 1.00
                                                            1.00
PCE Adj:
          1.00 1.00
                   1.00
                                1.00
                                     1.00 1.00
                                              1.00
                                                  1.00 1.00
          1.00 1.00 1.00
                       1.00 1.00
                                                           1.00
MLF Adj:
FinalVolume: 31 1162
                   74
                        141 1805
                                  23
                                       34
                                               23
                                                    73
                                                            178
                                           23
-----||----||-----||-----|
Saturation Flow Module:
          1700 1700 1700
                                                           1700
Sat/Lane:
Adjustment: 1.00 1.00 1.00 1.00 1.00
                               1.00 1.00 1.00
                                              1.00 1.00 1.00
                                                           1.00
                       1.00 2.96 0.04 0.42 0.29
                                              0.29
                                                  1.00 0.11
          1.00 2.82 0.18
Lanes:
                                64
                                     723 489
                                              489 1700 195
Final Sat.:
         1700 4795
                   305 1700 5036
_____| ___| ___| ____| _____| | ______| | _____| | _____| | _____| | _____|
Capacity Analysis Module:
                        0.08 0.36
          0.02 0.24 0.24
                                0.36 0.05 0.05
                                              0.05
                                                   0.04 0.12
Vol/Sat:
                            ***
          ***
Crit Moves:
Green/Cycle: 0.03 0.39 0.39
                       0.13 0.50 0.50
                                     0.16 0.16
                                              0.16
                                                   0.16 0.16
                                                           0.16
Volume/Cap: 0.72 0.62 0.62
                       0.62 0.72
                                0.72
                                     0.29 0.29
                                              0.29
                                                   0.26 0.72
          92.6 25.1
                   25.1
                               20.5
                                     37.2 37.2
                                              37.2
                                                   36.9 48.2
Delay/Veh:
                       46.0 20.5
                                     1.00 1.00
User DelAdj: 1.00 1.00
                  1.00
                       1.00 1.00
                               1.00
                                              1.00
                                                   1.00 1.00
                                                           1.00
                                                   36.9 48.2
                  25.1
                       46.0 20.5
                                20.5
                                     37.2 37.2
                                              37.2
                                                           48.2
AdjDel/Veh: 92.6 25.1
                     С
                                  С
                                       D
                                           D
                                                D
                                                     D
                                                         D
           F
               С
                          D
                             С
                                                              D
LOS by Move:
                                        2
                                            2
                                                2
                                                     2
            2
               11
                    11
                          5
                             16
                                16
********************
Note: Queue reported is the number of cars per lane.
************
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Cumulative (2020) + ProjectWed Jan 7, 2009 09:47:28
                                                       Page 5-1
               Huntington Beach Traffic Impact Analysis
         Cumulative (2020) + Project AM Alt with cross traffic
                 Level Of Service Computation Report
         2000 HCM Operations Method (Future Volume Alternative)
***********
Intersection #7 Pacific Coast Hwy / Main St
******************
                               Critical Vol./Cap.(X):
                100
Cycle (sec):
                31 (Y+R=4.0 sec) Average Delay (sec/veh):
                                                          7.7
Loss Time (sec):
Optimal Cycle:
                77
                               Level Of Service:
*****************
               Pacific Coast Hwy
                                              Main St
Street Name:
          North Bound
                        South Bound
                                      East Bound
Approach:
         L - T - R L - T - R L - T - R
                                                   L - T - R
Movement:
Protected
                                        Protected
                                                     Protected
            Protected
Control:
                           Include
                                         Include
              Include
Rights:
                            0
                                          0
                                                        0
                                                              0
              0
                    0
                          0
                                  0
                                        Ω
                                               Ω
            0
Min. Green:
                        1 0 3 0 0 0 0 0 0
           1 0 3 0 1
                                                   1 0 0 0 1
Volume Module:
           11 1141
                         0 1806
                                       0
                                                0
                                                     0
                   0
                                   0
                                           0
Base Vol:
Growth Adj: 1.00 1.00 1.00
                       1.00 1.00
                                1.00
                                     1.00 1.00
                                              1.00
                                                   1.00 1.00
                          0 1806
           11 1141
                     0
                                   Ω
                                        0
                                           Ω
                                                0
                                                     0
                                                         0
                                                              0
Initial Bse:
                     0
                          0
                             0
Added Vol:
            0
                0
PasserByVol:
            0
                0
                     0
                          0
                              0
                                   0
                                        0
                                            0
                                                0
                                                     0
                                                         Λ
                                                              Λ
Initial Fut: 11 1141
                     0
                          0 1806
                                   0
                                        0
                                           0
                                                0
                               1.00
                                     1.00 1.00
                                             1.00
                                                   1.00 1.00
          1.00 1.00 1.00
                       1.00 1.00
User Adj:
                                1.00
                                     1.00 1.00
                                              1.00
                                                   1.00 1.00
          1.00 1.00
                   1.00
                        1.00 1.00
PHF Adj:
                                        0
                                                     0
                                                         0
                     0
                          0 1806
                                   0
                                           0
                                                0
                                                              0
PHF Volume:
           11 1141
Reduct Vol:
            0
                0
                     0
                          0
                              0
                                   0
                                        0
                                            0
                                                0
Reduced Vol:
           11 1141
                     0
                          0 1806
                                   0
                                        0
                                           0
                                                0
                                                     0
                                                              O
          1.00 1.00
                   1.00
                       1.00 1.00
                                1.00
                                     1.00 1.00
                                              1.00
                                                   1.00 1.00
PCE Adj:
                                1.00
                                     1.00 1.00
                                              1.00
                                                   1.00 1.00
          1.00 1.00 1.00
                       1.00 1.00
MLF Adj:
                                   0
                                       0
                                         0
                                                0
                                                     0
           11 1141
                    0
                          0 1806
FinalVolume:
-----||----||-----||------|
Saturation Flow Module:
          1700 1700
                   1700 1700 1700
                                1700 1700 1700
                                              1700 1700 1700
Sat/Lane:
Adjustment: 1.00 1.00
                   1.00 1.00 1.00
                                1.00 1.00 1.00
                                              1.00 1.00 1.00
                   1.00 1.00 3.00 0.00 0.00 0.00
                                              0.00 1.00 0.00
          1.00 3.00
                                   0
                                          0
                                                0 1700
Final Sat.: 1700 5100 1700 1700 5100
                                       0
-----||-----||-----||------|
Capacity Analysis Module:
Vol/Sat:
          0.01 0.22 0.00
                        0.00 0.35
                                0.00 0.00 0.00
                                              0.00
                                                  0.00 0.00 0.00
Crit Moves:
                  0.00 0.00 0.68
                                0.00
                                     0.00 0.00
                                              0.00
                                                   0.00 0.00
Green/Cycle: 0.01 0.69
                                                            0.00
                   0.00
                       0.00 0.52
                                0.00
                                     0.00 0.00
                                              0.00
                                                   0.00 0.00
                                                            0.00
Volume/Cap: 0.52 0.32
                                                   0.0 0.0
Delay/Veh:
          70.9
               6.2
                   0.0
                        0.0 8.2
                                0.0
                                      0.0 0.0
                                              0.0
User DelAdj: 1.00 1.00
                   1.00
                        1.00 1.00
                                1.00
                                     1.00 1.00
                                              1.00
                                                   1.00 1.00
                                                           1.00
AdjDel/Veh: 70.9 6.2
                    0.0
                        0.0 8.2
                                 0.0
                                      0.0
                                         0.0
                                               0.0
                                                   0.0
                                                      0.0
                                                            0.0
                                                     Α
                                                         Α
                                                              Α
            Ε
                Α
                     Α
                          Α
                              Α
                                   Α
                                       А
                                           Α
                                                Α
LOS by Move:
                5
                              9
                                   0
                                                0
                          0
                                        0
HCM2kAvqQ:
Note: Queue reported is the number of cars per lane.
************************
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Cumulative (2020) + ProjectWed Jan 7, 2009 09:47:28 Page 6-1 Huntington Beach Traffic Impact Analysis Cumulative (2020) + Project AM Alt with cross traffic Level Of Service Computation Report 2000 HCM Operations Method (Future Volume Alternative) ***************************** Intersection #8 Pacific Coast Hwy / 1st St ************************* Cycle (sec): 100 Critical Vol./Cap.(X): Loss Time (sec): 31 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 163 Level Of Service: ****************************** Pacific Coast Hwy 1st St Street Name: Approach: North Bound South Bound East Bound L - T - R L - T - R L - T - R Movement: L - T - R Split Phase Split Phase Split Phase Split Phase Control: Include Include Include Rights: Include 0 0 0 0 0 0 0 0 Min. Green: 0 0 0 0 1 0 2 1 0 1 0 2 1 0 1 1 0 0 1 1 1 0 0 Lanes: Volume Module: 45 998 79 23 Base Vol: 168 121 1637 68 45 239 90 190 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 998 168 121 1637 68 79 45 23 239 90 190 Initial Bse: 45 0 0 0 0 0 0 0 Added Vol: 0 0 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 Initial Fut: 45 998 168 121 1637 68 79 45 23 239 90 190 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 User Adj: 1.00 1.00 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 PHF Volume: 79 45 998 168 121 1637 68 45 23 239 90 190 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 Ω Reduced Vol: 45 998 168 121 1637 68 79 45 23 239 90 190 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 FinalVolume: 45 998 168 121 1637 68 79 45 23 239 190 Saturation Flow Module: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 Adjustment: 1.00 2.57 0.43 1.00 2.88 0.12 1.27 0.73 1.00 1.45 0.55 Lanes: Final Sat.: 1700 4365 735 1700 4897 203 2166 1234 1700 2470 930 Capacity Analysis Module: Vol/Sat: 0.03 0.23 0.07 0.33 0.04 0.04 0.10 0.10 Crit Moves: Green/Cycle: 0.23 0.23 0.23 0.33 0.33 0.33 0.04 0.04 0.04 0.10 0.10 0.10 1.01 Volume/Cap: 0.12 1.01 1.01 0.21 1.01 1.01 1.01 0.37 1.01 1.01 0.58 Delay/Veh: 30.9 67.4 67.4 24.3 57.5 57.5 131.8 132 50.9 97.3 97.3 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 AdjDel/Veh: 30.9 67.4 67.4 24.3 57.5 57.5 131.8 132 50.9 97.3 97.3 Ε С Ε F D F F D LOS by Move: С Ε Ε F 5 18 18 3 25 25 5 HCM2kAvqQ: Note: Queue reported is the number of cars per lane. *******************************

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Cumulative (2020) + ProjectWed Jan 7, 2009 09:47:28
              ______
              Huntington Beach Traffic Impact Analysis
         Cumulative (2020) + Project AM Alt with cross traffic
                Level Of Service Computation Report
         2000 HCM Operations Method (Future Volume Alternative)
************************
Intersection #9 Pacific Coast Hwy / Huntington St
************************************
                100
Cycle (sec):
                              Critical Vol./Cap.(X):
               5 (Y+R=4.0 sec) Average Delay (sec/veh):
Loss Time (sec):
                                                       8.2
               33
                              Level Of Service:
Optimal Cycle:
****************************
Street Name:
              Pacific Coast Hwy
                                          Huntington St
                       South Bound East Bound
Approach:
          North Bound
                                                   West Bound
                      L - T - R \qquad L - T - R
Movement:
          L - T - R
                                                 L - T - R
Protected Permitted
            Protected
                                                   Permitted
             Include
                          Include
                                       Include
Rights:
                                                    Include
                         0 0 0
Min. Green:
            0 0 0
                                      0 0
                                              0
                                                     0
Lanes:
          1 0 2 0 1 1 0 2 0 1
                                    0 1 0 1 0
                                                  1 1 0 0 1
Volume Module:
           56 1091
Base Vol:
                  163
                        26 1776
                                     11
                                         23
                                              45
                                                  109
                                 11
                                                      68
                               1.00 1.00 1.00
                                            1.00
         1.00 1.00 1.00 1.00 1.00
                                                         1.00
Growth Adj:
                                                 1.00 1.00
                   163
Initial Bse:
           56 1091
                        26 1776
                                 11
                                     11
                                         23
                                              45
                                                  109
Added Vol:
            0
                0
                   0
                         0
                             0
                                 0
                                      Λ
                                          0
                                               0
                                                   0
                                                       0
                                                            0
PasserByVol:
            0
                0
                    0
                         0
                             0
                                  0
                                      0
                                          0
                                               0
                                                   0
                                                       0
                                                            0
                                         23
           56 1091
                  163
                                              45
Initial Fut:
                        26 1776
                                 11
                                     11
                                                  109
                                                      68
                                                           23
                      1.00 1.00
         1.00 1.00 1.00
                               1.00
                                    1.00 1.00 1.00
User Adj:
                                                 1.00 1.00
          1.00 1.00
                  1.00
                       1.00 1.00
                               1.00
                                    1.00 1.00
PHF Adj:
                                            1.00
                                                 1.00 1.00
                                                         1.00
PHF Volume:
           56 1091
                   163
                        26 1776
                                 11
                                     11
                                         23
                                              45
                                                  109
                                                      68
                                                           23
Reduct Vol:
           0
                   0.
                         0
                                 0
                                      0
                                         0
                                               0
                                                   0
                                                       0
                                                            0
                0
                           0
Reduced Vol:
           56 1091
                        26 1776
                                         23
                   163
                                 11
                                     11
                                              45
                                                  109
                                                      68
                                                           23
          1.00 1.00
                  1.00
                       1.00 1.00
                               1.00 1.00 1.00
                                            1.00
                                                 1.00 1.00
PCE Adj:
                                                         1.00
         1.00 1.00 1.00 1.00 1.00
                              1.00 1.00 1.00
MLF Adj:
                                            1.00
                                                 1.00 1.00
                                                         1.00
FinalVolume: 56 1091
                   163
                        26 1776
                                 11
                                     11
                                         23
                                              45
                                                  109
-----||-----||-----||-----|
Saturation Flow Module:
Sat/Lane:
         1700 1700 1700 1700
         1.00
                                                 1.00 1.00 1.00
Adjustment:
         1.00 2.00 1.00 1.00 2.00 1.00 0.32 0.68
                                            1.00
Lanes:
                                                 1.23 0.77
Final Sat.: 1700 3400 1700 1700 3400 1700
                                   550 1150 1700 2094 1306 1700
Capacity Analysis Module:
         0.03 0.32 0.10
                      0.02 0.52
Vol/Sat:
                               0.01 0.02 0.02 0.03
                                                 0.05 0.05
                                                         0.01
         ****
                           ***
Crit Moves:
Green/Cycle: 0.05 0.83 0.83 0.04 0.82
                              0.82
                                    0.08 0.08
                                            0.08
                                                 0.08 0.08
                                                         0.08
                      0.39 0.64
Volume/Cap: 0.64 0.39
                 0.12
                               0.01
                                    0.25 0.25
                                            0.33
                                                 0.64 0.64
Delay/Veh:
          61.3 2.2
                  1.7
                       50.5 4.0
                               1.7
                                    43.5 43.5
                                            44.1
                                                 49.5 49.5
User DelAdj: 1.00 1.00
                              1.00 1.00 1.00
                 1.00
                       1.00 1.00
                                            1.00
                                                 1.00 1.00
AdjDel/Veh: 61.3 2.2
                   1.7
                       50.5
                          4.0
                                1.7
                                    43.5 43.5
                                            44.1
                                                 49.5 49.5
                                                         43.3
LOS by Move:
           \mathbf{E}
                    Α
                         D
                            \mathbf{A}
                                A
                                      D
                                          D
                                               D
                                                   D
            3
                    1
                                0
                                      1
HCM2kAvqQ:
               4
                         1
                            11
                                          1
***********************************
Note: Queue reported is the number of cars per lane.
*******************************
```

```
Cumulative (2020) + ProjectWed Jan 7, 2009 09:47:28
______
              Huntington Beach Traffic Impact Analysis
         Cumulative (2020) + Project AM Alt with cross traffic
                Level Of Service Computation Report
         2000 HCM Operations Method (Future Volume Alternative)
Intersection #16 Main St / Adams Ave
*********************
                100
                              Critical Vol./Cap.(X):
Cycle (sec):
               5 (Y+R=4.0 sec) Average Delay (sec/veh):
                                                      16.2
Loss Time (sec):
                23
                              Level Of Service:
Optimal Cycle:
******************
Street Name:
                  Main St
                                            Adams Ave
          North Bound
                       South Bound
                                      East Bound
                                                   West Bound
Approach:
                      L - T - R L - T - R
         L - T - R
Movement:
_____| ____
            Permitted
                        Permitted
                                      Permitted
                                                   Permitted
Control:
                         Include
                                      Include
                                                    Include
Rights:
             Include
                                      0 0 0
                                                           0
Min. Green:
            0 0 0
                        0 0
                                0
                                                   0
                                                    0
                                                 0 1 0 0 1
          1 0 1 0 1 1 0 1 0 1
                                    0 1 0 0 1
       ---|------||------||-------||------||------|
Volume Module:
           23 432
                   119
                        56 425
                                 34
                                     11 259
                                              11
                                                  87 214
Base Vol:
                               1.00
                                    1.00 1.00
                                            1.00
                                                1.00 1.00
                                                         1.00
Growth Adj: 1.00 1.00
                  1.00
                      1.00 1.00
                                        259
Initial Bse:
           23
              432
                   119
                        56
                           425
                                 34
                                     11
                                              11
                                                  87
                                                     214
           0
               0
                   0
                         0
                             0
                                 0
                                      0
                                          0
                                              0
                                                   0
                                                       0
                                                           0
Added Vol:
               0
                    0
                         0
                             0
                                 0
                                      0
                                          0
                                              0
                                                   0
                                                       0
                                                           0
PasserByVol:
           0
                        56
                          425
                                 34
                                       259
                                              11
                                                  87 214
                                                           34
                   119
                                     11
Initial Fut:
           23 432
                      1.00 1.00
                              1.00
                                    1.00 1.00
                                           1.00
                                                1.00 1.00
         1.00 1.00 1.00
User Adj:
                       1.00 1.00
                               1.00
                                    1.00 1.00
                                            1.00
                                                 1.00 1.00
PHF Adj:
          1.00 1.00
                  1.00
PHF Volume:
           23
              432
                   119
                        56
                          425
                                 34
                                     11
                                       259
                                              11
                                                  87
                                                     214
                    0
                        0
                             0
                                 0
                                      0
                                         0
                                              0
                                                   0
                                                       Ω
                                                           0
Reduct Vol:
           0
                0
Reduced Vol:
                                 34
                                       259
                                              11
                                                  87
                                                     214
           23 432
                   119
                        56 425
                                     11
                                    1.00 1.00
                                            1.00
                                                 1.00 1.00
                  1.00
                       1.00 1.00
                              1.00
                                                         1.00
PCE Adj:
          1.00 1.00
                       1.00 1.00
                               1.00
                                    1.00 1.00
                                            1.00
                                                1.00 1.00
          1.00 1.00
                 1.00
MLF Adj:
                                 34
                                     11 259
                                              11
                                                  87 214
FinalVolume:
           23 432
                   119
                        56 425
-----||-----||------|
Saturation Flow Module:
         1700 1700 1700
                                                         1700
Sat/Lane:
                  1.00 1.00 1.00 1.00 1.00 1.00
                                            1.00 1.00 1.00
Adjustment: 1.00 1.00
                  1.00 1.00 1.00 1.00 0.04 0.96
                                            1.00 0.29 0.71
         1.00 1.00
Lanes:
                 1700 1700 1700 1700
                                     69 1631
                                            1700
                                                 491 1209
Final Sat.: 1700 1700
_____|
Capacity Analysis Module:
          0.01 0.25
                  0.07
                       0.03 0.25 0.02
                                    0.16 0.16 0.01
                                                 0.18 0.18
Vol/Sat:
Crit Moves:
                                    0.39 0.39
                                            0.39
Green/Cycle: 0.56 0.56 0.56
                       0.56 0.56 0.56
                                                0.39 0.39
                                                         0.39
Volume/Cap: 0.02 0.45
                  0.13
                       0.06 0.45
                               0.04
                                    0.41 0.41
                                            0.02
                                                0.45 0.45
                                                         0.05
                  10.5
                       10.0 13.2
                               9.9
                                    22.5 22.5
                                            18.7
                                                23.1 23.1
Delay/Veh:
          9.8 13.3
                                   1.00 1.00
                                            1.00
                                                1.00 1.00
User DelAdj: 1.00 1.00
                  1.00
                       1.00 1.00
                              1.00
                                    22.5 22.5
                                            18.7
AdjDel/Veh: 9.8 13.3
                  10.5
                       10.0 13.2
                                9.9
                                                 23.1 23.1
                                                   С
                                                       С
                            В
                                      С
                                          C
                                                           В
                В
                    В
                         В
                                 Α
                                              В
LOS by Move:
           \mathbf{A}
                    2
                            8 0
                                      6
                                          6
                                              0
           0
                8
                         1
HCM2kAvqQ:
******************
Note: Queue reported is the number of cars per lane.
******************
```

```
Cumulative (2020) + ProjectWed Jan 7, 2009 09:47:28 Page 9-1
             ______
              Huntington Beach Traffic Impact Analysis
         Cumulative (2020) + Project AM Alt with cross traffic
                Level Of Service Computation Report
         2000 HCM 4-Way Stop Method (Future Volume Alternative)
************************************
Intersection #17 Main St / Walnut Ave
************************************
Cycle (sec):
               100
                             Critical Vol./Cap.(X):
             0 (Y+R=4.0 sec) Average Delay (sec/veh):
0 Level Of Service:
Loss Time (sec):
                                                     7.4
Optimal Cycle:
                             Level Of Service:
************************************
            Main St
Street Name:
                                           Walnut Ave
          North Bound South Bound East Bound L - T - R L - T - R L - T - R
Approach:
                                                  West Bound
Movement:
                                               L - T - R
Stop Sign Stop Sign Include Include
           Stop Sign
                                                 Stop Sign
Rights:
             Include
                                                  Include
Min. Green:
           0 0 0
                        0 0 0
                                     0 0 0
                                                 0 0
                                                          0
          0 0 1! 0 0 0 0 1! 0 0 0 0 1 0 0
                                                0 0 1 0 0
Volume Module:
           0
               0
                 0
                        0
                            0
                                     0
                                        77
Base Vol:
                              0
                                           0
                                                  0
                                                     83
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00
                                  1.00 1.00
                                           1.00
                                               1.00 1.00
Initial Bse: 0 0
                 0
                      0
                            0
                              0
                                     0
                                        77
                                             0
Added Vol:
           0
               0
                    0
                        0
                            0
                                0
                                     0
                                        0
                                             0
                                                  0
                                                     0
                                                          0
           0
                    0
                                0
PasserByVol:
               0
                        0
                            0
                                     0
                                        0
                                             0
                                                  0
                                                     0
                                                          0
Initial Fut:
           0
               0
                    0
                            0
                                0
                                        77
                        0
                                     0
                                             0
                                                     83
                                               1.00 1.00
User Adj:
        1.00 1.00 1.00
                      1.00 1.00
                             1.00
                                  1.00 1.00 1.00
         1.00 1.00 1.00
                      1.00 1.00
PHF Adj:
                              1.00
                                   1.00 1.00
                                           1.00
                                               1.00 1.00
PHF Volume:
           0
               0
                  0
                        0
                            0
                                0
                                     0
                                        77
                                             0
                                                  0
                                                     83
                                                          0
           0
               0
                    0
                        0
                                0
                                     0
                                        0
Reduct Vol:
                            0
                                             0
                                                     0
                                        77
Reduced Vol:
           0
              0
                   0
                        0
                            0
                                0
                                     0
                                             0
                                                  0
                                                     83
                                                          Ω
         1.00 1.00
PCE Adj:
                 1.00
                      1.00 1.00
                             1.00
                                  1.00 1.00
                                           1.00
                                               1.00 1.00
MLF Adj:
                                          1.00 1.00 1.00 1.00
      1.00 1.00 1.00 1.00 1.00 1.00
                                  1.00 1.00
FinalVolume:
           0
             0
                 0
                      0 0
                              0
                                  0 77
                                           0
Saturation Flow Module:
0.00 1.00 0.00 0.00 1.00 0.00 0.00 1.00
                                           0.00 0.00 1.00 0.00
Lanes:
Final Sat.: 0 823 0 0 823 0 0 903 0 0 904
-----||-----||-----|
Capacity Analysis Module:
Vol/Sat: xxxx 0.00 xxxx
                      xxxx 0.00 xxxx xxxx 0.09 xxxx xxxx 0.09 xxxx
         ***
                          ****
Crit Moves:
                                      ****
         0.0 0.0 0.0
                      0.0 0.0
                                   0.0 7.3
Delay/Veh:
                              0.0
                                           0.0
                                                0.0 7.4
                                                        0.0
         1.00 1.00 1.00
                      1.00 1.00
                             1.00
                                  1.00 1.00
                                           1.00
Delay Adj:
                                               1.00 1.00
                                                       1.00
AdjDel/Veh: 0.0 0.0
                  0.0
                       0.0
                          0.0
                               0.0
                                   0.0
                                       7.3
                                            0.0
                                                0.0
                                                    7.4
                                                        0.0
LOS by Move:
                                        Α
                                                     Α
ApproachDel:
                                       7.3
                                                    7.4
           XXXXXX
                       XXXXXX
                        XXXXX
                                      1.00
                                                   1.00
Delay Adj:
           XXXXX
                                       7.3
ApprAdjDel:
           XXXXXX
                       XXXXXX
                                                    7.4
LOS by Appr:
                                        Α
AllWayAvgQ: 0.0 0.0 0.0 0.0 0.0 0.0
                                   0.1 0.1
                                            0.1
                                                0.1 0.1
Note: Queue reported is the number of cars per lane.
```

```
Cumulative (2020) + ProjectWed Jan 7, 2009 09:47:28 Page 10-1
______
            Huntington Beach Traffic Impact Analysis
       Cumulative (2020) + Project AM Alt with cross traffic
              Level Of Service Computation Report
       2000 HCM 4-Way Stop Method (Future Volume Alternative)
*************
Intersection #18 Main St / Olive Ave
******************
             100
                         Critical Vol./Cap.(X):
Cycle (sec):
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 0 Level Of Service:
                                              8.0
*************************
           Main St
                                     Olive Ave
Street Name:
        North Bound South Bound East Bound L - T - R L - T - R
Approach:
                                          West Bound
Movement:
                                         L - T - R
Stop SignStop SignStop SignStop SignIncludeIncludeIncludeInclude000000
Rights:
         0 0 0
Min. Green:
         _____|
Volume Module:
Base Vol:
          0
             0
               0
                     0
                       0
                          0
                                0 158
                                     0
                                           0 173
Growth Adj: 1.00 1.00 1.00 1.00 1.00
                              1.00 1.00 1.00
                                         1.00 1.00
                                                1.00
                   0 0 0
                                0 158
                                     0
                                         0 173
Initial Bse: 0 0
               0
Added Vol:
          0
             0
                . 0
                     0
                        0
                           0
                                0
                                   0
                                       0
                                           0
                                              Ω
PasserByVol:
             0
                 0
                     0
                        0
                            0
                                0
                                   0
                                       0
                                               0
          0
                 0
                     0
                        0
                            0
                                0 158
                                       0
                                           0 173
Initial Fut:
          0
             0
       1.00 1.00 1.00 1.00 1.00
                          1.00
                              1.00 1.00 1.00
                                         1.00 1.00
User Adj:
PHF Adj:
        1.00 1.00 1.00
                   1.00 1.00
                          1.00
                              1.00 1.00 1.00
                                         1.00 1.00
PHF Volume: 0
           0
               0
                   0
                       0
                          0
                                0 158
                                      0
                                           0
                                             173
Reduct Vol:
          0
             0
                0
                     0
                        0
                            0
                                0
                                  0
                                       0
                                              Ω
                     0
                            0
                                0 158
                                       0
                                             173
Reduced Vol:
         0
            0
                0
                        0
                                         1.00 1.00
        1.00
PCE Adj:
      MLF Adj:
                          0
                              0 158
                                      0
              0
                   0 0
                                          0 173
FinalVolume: 0 0
-----||-----||------|
Saturation Flow Module:
0.00\ 1.00\ 0.00\ 0.00\ 1.00\ 0.00\ 1.00\ 0.00\ 0.00\ 1.00\ 0.00
Lanes:
Final Sat.: 0 740 0 0 740 0 0 882 0
-----||-----||------|
Capacity Analysis Module:
Vol/Sat: xxxx 0.00 xxxx xxxx 0.00 xxxx xxxx 0.18 xxxx xxxx 0.20 xxxx
Crit Moves: ****
                      ****
                                  ****
                                             ***
                              0.0 7.9
        0.0 0.0 0.0
                    0.0 0.0
                          0.0
                                          0.0 8.0
                                      0.0
Delay/Veh:
                                                 0.0
        1.00 1.00 1.00 1.00 1.00 1.00 1.00
                                     1.00
                                         1.00 1.00
                                                1.00
Delay Adj:
AdjDel/Veh: 0.0 0.0 0.0
                           0.0
                               0.0 7.9
                                      0.0
                    0.0 0.0
                                          0.0 8.0
                                                 0.0
                                  A
                                             A
LOS by Move:
                                  7.9
                                             8.0
ApproachDel:
                    XXXXXX
          XXXXXX
                                  1.00
                                             1.00
Delay Adj:
          XXXXX
                     XXXXX
ApprAdjDel:
                                  7.9
                                             8.0
          XXXXXX
                    XXXXXX
LOS by Appr:
                                   Α
AllWayAvqQ: 0.0 0.0 0.0 0.0 0.0 0.0 0.2 0.2
                                      0.2 0.2 0.2
******************
Note: Queue reported is the number of cars per lane.
```

```
Cumulative (2020) + ProjectWed Jan 7, 2009 09:47:28
                                                    Page 11-1
              Huntington Beach Traffic Impact Analysis
         Cumulative (2020) + Project AM Alt with cross traffic
                Level Of Service Computation Report
         2000 HCM Operations Method (Future Volume Alternative)
**************
Intersection #19 Main St / 6th St
*****************
Cycle (sec):
                100
                              Critical Vol./Cap.(X):
              5 (Y+R=4.0 sec) Average Delay (sec/veh):
17 Level Of Service:
                                                      15.8
Loss Time (sec):
Optimal Cycle:
***********************
                                              6th St
Street Name:
                 Main St
                       South Bound
                                    East Bound
          North Bound
                                                   West Bound
Approach:
         L - T - R \qquad L - T - R \qquad L - T - R
                                                  L - T - R
Movement:
-----||-----||-----||-----------|
            Permitted Permitted Permitted
                                                   Permitted
Control:
             Include
                          Include
                                        Include
                                                     Include
Rights:
                         0 0 0
                                      0 0 0
                                                     0
                                                            0
Min. Green:
           0 0 0
                                                   0
          1 0 0 1 0 1 0 0 1 0
                                     1 0 1 0 1
                                                  1 0 1 0 1
Volume Module:
           12
               93
                   12
                        11 116
                               164
                                     144
                                         59
                                              23
                                                   59
                                                       65
Base Vol:
                               1.00
                       1.00 1.00
                                    1.00 1.00
                                            1.00
                                                 1.00 1.00
                                                          1.00
Growth Adj: 1.00 1.00
                 1.00
                                164
                                              23
                                                       65
Initial Bse:
           12
               93
                    12
                        11
                           116
                                     144
                                         59
                                                   59
                                                           11
Added Vol:
            0
                0
                    0
                         0
                             0
                                  0
                                      0
                                          0
                                               0
                                                   0
                                                       0
                                                            0
            0
                0
                    0
                         0
                             0
                                  0
                                      0
                                          0
                                               0
                                                    0
                                                       0
                                                            0
PasserByVol:
                    12
                                              23
                                                   59
                                                       65
                                     144
                                         59
                                                           11
           12
               93
                        11
                           116
                               164
Initial Fut:
          1.00 1.00
                 1.00
                       1.00 1.00
                               1.00
                                    1.00 1.00
                                            1.00
                                                 1.00 1.00
User Adj:
                                                 1.00 1.00
                                            1.00
          1.00 1.00
                  1.00
                       1.00 1.00
                               1.00
                                    1.00 1.00
PHF Adj:
PHF Volume:
           12
               93
                    12
                        11
                           116
                                164
                                     144
                                         59
                                              23
                                                   59
                                                       65
                                                           11
           0
               0
                    0
                         0
                             0
                                  Ω
                                      0
                                         0
                                              0
                                                    Ω
                                                       0
                                                            Ω
Reduct Vol:
                                164
                                     144
                                         59
                                              23
                                                   59
Reduced Vol:
           12
               93
                    12
                        11
                           116
                               1.00
                                    1.00 1.00
                                            1.00
                                                 1.00 1.00
                  1.00
                       1.00 1.00
PCE Adj:
          1.00 1.00
                       1.00 1.00
                               1.00
                                    1.00 1.00
                                            1.00
                                                 1.00 1.00
          1.00 1.00
                  1.00
MLF Adj:
                                                   59
                                164
                                     144
                                         59
                                              23
FinalVolume:
           12
               93
                    12
                        11 116
Saturation Flow Module:
         1700 1700 1700
Sat/Lane:
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00
                                            1.00 1.00 1.00
         1.00 0.89 0.11
                       1.00 0.41 0.59
                                    1.00 1.00
                                            1.00 1.00 1.00 1.00
Lanes:
Final Sat.: 1700 1506
                  194 1700 704
                               996 1700 1700 1700 1700 1700 1700
Capacity Analysis Module:
                                    0.08 0.03 0.01
                                                 0.03 0.04 0.01
Vol/Sat:
          0.01 0.06 0.06
                       0.01 0.16
                               0.16
                                    ****
                           ***
Crit Moves:
                                            0.32
                                                 0.32 0.32
                                                          0.32
Green/Cycle: 0.63 0.63 0.63 0.63 0.63 0.63
                                    0.32 0.32
                                                 0.11 0.12
                                            0.04
Volume/Cap: 0.01 0.10
                  0.10
                       0.01 0.26
                               0.26
                                    0.26 0.11
                                                          0.02
          7.0
                   7.4
                       7.0 8.4
                                8.4
                                    25.3 23.9
                                            23.3
                                                 23.9 23.9
Delay/Veh:
              7.4
                      1.00 1.00
                              1.00
                                    1.00 1.00
                                            1.00
                                                 1.00 1.00
User DelAdj: 1.00 1.00
                  1.00
                                    25.3 23.9
                                            23.3
                                                 23.9 23.9
AdjDe1/Veh: 7.0 7.4
                   7.4
                        7.0 8.4
                               8.4
                                          С
                                               С
                                                       С
                                                            С
                                  Α
                                      С
                                                    С
           Α
                Α
                    Α
                         Α
                             Α
LOS by Move:
        0
                             4
                                4
                                      3
                                          1
                                               0
                                                    1
HCM2kAvgQ:
                1
                    1
                         0
******************
Note: Queue reported is the number of cars per lane.
*************************
```

```
Cumulative (2020) + ProjectWed Jan 7, 2009 09:47:28
                                                   Page 12-1
             -----
              Huntington Beach Traffic Impact Analysis
         Cumulative (2020) + Project AM Alt with cross traffic
                Level Of Service Computation Report
         2000 HCM 4-Way Stop Method (Future Volume Alternative)
*******************************
Intersection #20 Lake St / 6th St
******************************
Cycle (sec):
               100
                              Critical Vol./Cap.(X):
              0 (Y+R=4.0 sec) Average Delay (sec/veh):
0 Level Of Service:
Loss Time (sec):
                                                      8.3
Optimal Cycle:
******************************
             Lake St
Street Name:
                                             6th St
          West Bound
Approach:
Movement:
                                                 L - T - R
Stop Sign Stop Sign Include Include
            Stop Sign
                                                  Stop Sign
             Include
Rights:
                                                    Include
Min. Green:
            0 0 0
                         0 0 0
                                     0 0 0
                                                   0 0
          1 0 0 1 0
                       1 0 1 0 1 0 1 0 0 1
                                                 0 1 0 0 1
-----||-----||-----|
Volume Module:
            2
               56
                  0
                        54
                            42
                                     47
                                         26
                                                      79
Base Vol:
                                66
                                              3
Growth Adj: 1.00 1.00 1.00
                      1.00 1.00
                              1.00
                                   1.00 1.00
                                           1.00
                                                1.00 1.00
Initial Bse: 2
               56
                  0
                        54
                            42
                                66
                                     47
                                         26
                                              3
                                                          17
Added Vol:
            0
               0
                    0
                         0
                            0
                                 0
                                     0
                                         0
                                              0
                                                   0
                                                      0
                                                           0
               0
                    0
                        0
                             0
                                 0
                                         0
PasserByVol:
            0
                                     0
                                              0
                                                   0
                                                      0
                                                           0
            2
               56
                    0
                                              3
Initial Fut:
                        54
                            42
                                66
                                     47
                                         26
                                                   0
                                                      79
                                                          17
         1.00 1.00 1.00
                                                1.00 1.00
User Adj:
                      1.00 1.00
                              1.00
                                   1.00 1.00 1.00
         1.00 1.00
PHF Adj:
                  1.00
                      1.00 1.00
                              1.00
                                   1.00 1.00 1.00
                                                1.00 1.00
                                                         1.00
PHF Volume:
            2
               56
                    0
                        54
                            42
                                66
                                     47
                                         26
                                              3
                                                   0
                                                      79
                                                          17
               0
                    0
                        0
                            0
                                 0
                                     0
                                         0
                                                      0
Reduct Vol:
            0
                                              0
                                                           0
Reduced Vol:
            2
               56
                    0
                        54
                            42
                                66
                                     47
                                         26
                                              3
                                                      79
                                                   0
                                                          17
         1.00 1.00
PCE Adj:
                  1.00
                      1.00 1.00
                              1.00
                                   1.00 1.00
                                           1.00
                                                1.00 1.00
                                                        1.00
MLF Adj:
         1.00 1.00 1.00
                      1.00 1.00
                              1.00
                                   1.00 1.00 1.00
                                                1.00 1.00
                                                        1.00
FinalVolume:
            2
               56
                  0
                        54
                            42
                                66
                                     47
                                         26
                                             3
                                                   0
-----||-----||------|
Saturation Flow Module:
1.00 1.00 0.00 1.00 1.00
                               1.00 0.64 0.36
                                            1.00 0.00 1.00
Lanes:
Final Sat.: 622 681 0 623 682
                              787 411 227
                                            778
                                                0 679
-----|
Capacity Analysis Module:
Vol/Sat: 0.00 0.08 xxxx
                      0.09 0.06 0.08
                                   0.11 0.11 0.00 xxxx 0.12
         ****
                      ****
Crit Moves:
          8.3 8.2
                                    8.8 8.8
Delay/Veh:
                  0.0
                       8.8 8.1
                               7.5
                                             7.1
                                                 0.0 8.5
                                                         7.2
                                   1.00 1.00
                                            1.00
         1.00 1.00 1.00
                      1.00 1.00 1.00
Delay Adj:
                                                1.00 1.00
                                                         1.00
AdjDel/Veh: 8.3 8.2
                   0.0
                       8.8
                           8.1
                                7.5
                                    8.8
                                        8.8
                                             7.1
                                                 0.0
                                                          7.2
LOS by Move:
           Α
               Α
                         Α
                           Α
                                 Α
                                      Α
                                              А
                                         Α
                                                      Α
ApproachDel:
              8.2
                           8.1
                                        8.8
                                                     8.2
             1.00
                          1.00
                                       1.00
                                                    1.00
Delay Adj:
              8.2
                           8.1
                                        8.8
ApprAdjDel:
LOS by Appr:
               Α
                                         Α
AllWayAvgQ: 0.0 0.1
                 0.1 0.1 0.1
                                    0.1 0.1
                              0.1
                                            0.0
                                                 0.1 0.1
Note: Queue reported is the number of cars per lane.
```

Cumulative (2020) + ProjectWed Jan 7, 2009 09:47:28 Page 13-1 Huntington Beach Traffic Impact Analysis Cumulative (2020) + Project AM Alt with cross traffic Level Of Service Computation Report 2000 HCM 4-Way Stop Method (Future Volume Alternative) ****************** Intersection #21 Lake St / Orange Ave ****************** 100 Critical Vol./Cap.(X): Cycle (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh):
0 Level Of Service: Loss Time (sec): Optimal Cycle: ********************** Lake St Orange Ave Street Name: South Bound North Bound East Bound Approach: L - T - R L - T - R L - T - RL - T - R Movement: _____| Stop Sign Stop Sign Stop Sign Stop Sign Include Include Include Include Rights: 0 0 0 0 0 0 0 0 0 0 0 0 Min. Green: 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0 Lanes: -----||-----||-----| Volume Module: 37 40 105 31 258 44 57 286 Base Vol: 62 19 16 1.00 1.00 1.00 1.00 1.00 1.00 Growth Adj: 1.00 1.00 1.00 1.00 1.00 105 258 286 42 37 19 40 16 31 44 57 Initial Bse: 62 0 0 0 0 Added Vol: 0 0 0 0 0 0 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 37 19 40 105 16 31 258 44 57 286 42 Initial Fut: 62 1.00 1.00 1.00 1.00 1.00 1.00 1.00 User Adi: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 PHF Adj: 16 31 258 286 PHF Volume: 62 37 19 40 105 44 57 42 Reduct Vol: 0 0 Ω 0 0 0 0 0 0 0 0 0 Reduced Vol: 62 37 19 40 105 16 31 258 44 57 286 42 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 MLF Adj: 19 40 105 16 31 258 44 57 286 FinalVolume: 62 37 -----||-----||-----||-----------------| Saturation Flow Module: 0.53 0.31 0.16 0.25 0.65 0.10 0.09 0.78 0.13 0.15 0.74 0.11 Lanes: Final Sat.: 280 167 86 138 361 55 62 516 100 502 88 Capacity Analysis Module: Vol/Sat: 0.22 0.22 0.22 0.29 0.29 0.29 0.50 0.50 0.50 0.57 0.57 Crit Moves: **** **** *** **** 12.9 12.9 10.4 10.4 10.4 10.9 10.9 10.9 12.9 14.2 14.2 Delay/Veh: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 Delay Adj: 12.9 12.9 14.2 10.9 10.9 10.9 12.9 14.2 14.2 AdjDel/Veh: 10.4 10.4 10.4 LOS by Move: в в В в в В В ApproachDel: 10.4 10.9 12.9 14.2 1.00 1.00 1.00 Delay Adj: 1.00 12.9 10.9 14.2 10.4 ApprAdjDel: LOS by Appr: В В В AllWayAvgQ: 0.2 0.2 0.2 0.3 0.3 0.9 0.9 0.9 1.1 1.1 ********************* Note: Queue reported is the number of cars per lane.

```
Cumulative (2020) + ProjectWed Jan 7, 2009 09:47:28
                                                           Page 14-1
                Huntington Beach Traffic Impact Analysis
          Cumulative (2020) + Project AM Alt with cross traffic
                   Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
**********************************
Intersection #22 1st St / Orange Ave & Atlanta Ave
**********************************
Cycle (sec):
                  100
                                  Critical Vol./Cap.(X):
                 5 (Y+R=4.0 sec) Average Delay (sec/veh):
Loss Time (sec):
                                                              21.0
Optimal Cycle:
                  19
                                  Level Of Service:
*******************************
                                            Orange Ave & Atlanta Ave
Street Name:
                      1st St
Approach:
            North Bound
                          South Bound
                                          East Bound
           L - T - R
                         L - T - R
Movement:
                                         L - T - R
                                                        L - T - R
Control:
              Permitted
                             Permitted
                                           Protected
                                                          Protected
Rights:
               Include
                              Include
                                             Include
                                                           Include
                       0
                                      0
Min. Green:
             0
                 0
                            0
                               0
                                           0
                                              0
                                                    0
                                                            0
                                                          0
                                                                   0
            0 1 0 0 1
                          0 1 0 0 0
                                                        1 0 0 1
Lanes:
                                         1 0 1 1 0
-----|
Volume Module:
            72
Base Vol:
                  0
                     119
                               11
                                                    70
                           11
                                      0
                                           0 199
                                                        269 228
           1.00 1.00
                    1.00
                         1.00 1.00
                                   1.00
Growth Adj:
                                        1.00 1.00
                                                  1.00
                                                       1.00 1.00
                                                                 1.00
Initial Bse:
            72
                  0
                     119
                           11
                               11
                                      0
                                              199
                                                    70
                                                        269
                                                            228
                                           0
Added Vol:
                  0
                       0
                            0
                                0
                                      0
                                           0
                                               0
                                                    0
                                                          0
                                                              0
                                                                   O
PasserByVol:
             0
                  0
                       0
                            0
                                0
                                      0
                                           0
                                               0
                                                    0
                                                          0
                                                              0
                                                                   0
Initial Fut:
            72
                  0
                     119
                           11
                               11
                                      0
                                           0
                                             199
                                                    70
                                                        269
                                                            228
                                                                   O
           1.00 1.00
                    1.00
                         1.00 1.00
User Adj:
                                   1.00
                                        1.00 1.00
                                                 1.00
                                                       1.00 1.00
PHF Adj:
           1.00 1.00
                    1.00
                         1.00 1.00
                                   1.00
                                        1.00 1.00
                                                  1.00
                                                       1.00 1.00
PHF Volume:
            72
                     119
                  0
                           11
                                11
                                      0
                                           0
                                             199
                                                    70
                                                        269
                                                            228
Reduct Vol:
             0
                  0
                       0
                            0
                                Ω
                                      0
                                           U
                                               n
                                                    n
                                                          n
                                                              Λ
                                                                   \cap
Reduced Vol:
            72
                  0
                     119
                           11
                                11
                                      0
                                             199
                                                    70
                                                        269 228
PCE Adj:
           1.00 1.00
                    1.00
                         1.00 1.00
                                   1.00
                                        1.00 1.00
                                                  1.00
                                                       1.00 1.00
                                                                 1.00
MLF Adj:
           1.00 1.00
                    1.00
                         1.00 1.00
                                   1.00
                                        1.00 1.00
                                                  1.00
                                                       1.00 1.00
FinalVolume:
            72
                     119
                               11
                                      0
                                             199
                                                    70
                  0
                           11
                                           0
                                                        269
                                                           228
-----|
Saturation Flow Module:
Sat/Lane:
           1700 1700
                    1700
                         1700 1700
                                   1700 1700 1700
                                                  1700
                                                       1700 1700
           1.00 1.00
                    1.00 1.00 1.00
                                   1.00 1.00 1.00
                                                  1.00
Adjustment:
                                                       1.00 1.00
                                                                 1.00
           1.00 0.00
                    1.00 0.50 0.50
                                   0.00
                                                  0.52
Lanes:
                                        1.00 1.48
                                                       1.00 1.00
Final Sat.:
          1700
                  0
                    1700
                          850 850
                                    0
                                        1700 2515
                                                   885
                                                       1700 1700
-----||-----||-----||------|
Capacity Analysis Module:
Vol/Sat:
           0.04 0.00
                    0.07
                         0.01 0.01
                                  0.00
                                        0.00 0.08
                                                       0.16 0.13
Crit Moves:
                    ***
Green/Cycle: 0.22 0.00
                    0.22
                         0.22 0.22
                                   0.00
                                        0.00 0.24
                                                  0.24
                                                       0.49 0.73
                                                                 0.00
Volume/Cap: 0.20 0.00
                         0.06 0.06
                                   0.00
                    0.32
                                        0.00 0.32
                                                  0.32
                                                       0.32 0.18
                                                                 0.00
Delay/Veh:
           32.3
               0.0
                    33.5
                         31.2 31.2
                                    0.0
                                         0.0 31.2
                                                  31.2
                                                       15.7
User DelAdj: 1.00 1.00
                    1.00
                         1.00 1.00
                                   1.00
                                        1.00 1.00
                                                  1.00
                                                       1.00 1.00
                                                                1.00
AdjDel/Veh: 32.3
               0.0
                    33.5
                         31.2 31.2
                                    0.0
                                         0.0 31.2
                                                  31.2
                                                       15.7
                                                            4.2
                                                                 0.0
                       С
             С
                  Α
                            С
                                               С
                                                    С
LOS by Move:
                                С
                                     Α
                                           Α
                                                          В
                                                              Α
                                                                   Α
                       3
                            1
                                      0
                                           0
HCM2kAvqQ:
                                                    4
                                    ********************
Note: Queue reported is the number of cars per lane.
************************************
```

```
Cumulative (2020) + ProjectWed Jan 7, 2009 09:47:28
                                                         Page 15-1
               Huntington Beach Traffic Impact Analysis
         Cumulative (2020) + Project AM Alt with cross traffic
                  Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
*****************
Intersection #24 Beach Blvd / Pacific View Ave
******************
                 100
                                 Critical Vol./Cap.(X):
Cycle (sec):
                5 (Y+R=4.0 sec) Average Delay (sec/veh):
Loss Time (sec):
                                                             9.4
                  18
                                 Level Of Service:
Optimal Cycle:
***************
                                              Pacific View Ave
                   Beach Blvd
Street Name:
            North Bound
                         South Bound
                                          East Bound
Approach:
           L - T - R
                        L - T - R
                                        L - T - R
                                                      L - T - R
Movement:
-----||-----||-----||------|
                                          Protected
             Protected
                           Protected
                                                        Protected
Control:
               Include
                             Include
                                           Include
                                                          Include
Rights:
                              0
                                    0
                                             0
                                                   0
                                                        0
                                                           0
                                                                 0
             0
                0
                      0
                           0
                                          0
Min. Green:
           1 0 3 0 0
                          1 0 2 1 0
                                        1 0 0 0 1
                                                      0 0 0 0 0
Lanes:
Volume Module:
                           0 857
                                                  34
            34 470
                      0
                                   154
                                        115
                                              0
Base Vol:
Growth Adj: 1.00 1.00
                    1.00
                         1.00 1.00
                                  1.00
                                       1.00 1.00
                                                1.00
                                                      1.00 1.00
               470
                      0
                              857
                                   154
                                        115
                                                  34
                                                        O
                                                            0
            34
                           0
                                              0
                                                                 0
Initial Bse:
                      0
                                     0
                                          0
                                                   0
Added Vol:
             0
                 0
                           0
                               0
PasserByVol:
             0
                 0
                      0
                           0
                               0
                                     0
                                          0
                                              0
                                                   0
                                                        0
                                                            0
                                                                 0
            34
              470
                      0
                           0 857
                                   154
                                        115
                                              0
                                                  34
                                                        0
                                                            0
Initial Fut:
                         1.00 1.00
          1.00 1.00
                                  1.00
                                       1.00 1.00
                                                1.00
                                                     1.00 1.00
User Adj:
                   1.00
                                                      1.00 1.00
          1.00 1.00
                    1.00
                         1.00 1.00
                                  1.00
                                       1.00 1.00
                                                1.00
PHF Adj:
                              857
                                   154
                                              0
                                                  34
                                                        0
                                                            0
PHF Volume:
            34
               470
                      0
                           0
                                        115
Reduct Vol:
             0
                 0
                      0
                           0
                               0
                                     0
                                          0
                                              0
                                                   0
                                                            0
Reduced Vol:
            34
                470
                      0
                           0
                              857
                                   154
                                        115
                                              0
                                                  34
                                                        Ω
                                                            0
          1.00 1.00
                    1.00
                         1.00 1.00
                                  1.00
                                       1.00 1.00
                                                1.00
                                                      1.00 1.00
PCE Adj:
                    1.00
                                  1.00
                                       1.00 1.00
                                                1.00
                                                      1.00 1.00
                                                               1.00
MLF Adj:
          1.00 1.00
                         1.00 1.00
            34 470
                      0
                           0 857
                                   154
                                        115
                                              0
                                                  34
FinalVolume:
_____|
Saturation Flow Module:
          1700 1700
                   1700
                         1700 1700
                                  1700
                                       1700 1700
                                                1700
                                                     1700 1700
Sat/Lane:
                    1.00 1.00 1.00
                                  1.00
                                       1.00 1.00
                                                1.00
                                                     1.00 1.00
                                                               1.00
          1.00 1.00
Adjustment:
                                                      0.00 0.00
                                                               0.00
                    0.00
                         1.00 2.54
                                  0.46
                                       1.00 0.00
                                                1.00
          1.00 3.00
                                   777
                                                1700
Final Sat.: 1700 5100
                      0 1700 4323
                                       1700
                                              0
-----||----||-----||-----|
Capacity Analysis Module:
Vol/Sat:
          0.02 0.09 0.00
                         0.00 0.20
                                  0.20
                                       0.07 0.00 0.02
                                                     0.00 0.00 0.00
Crit Moves:
                                       0.22 0.00
                                                0.22
Green/Cycle: 0.07 0.73
                   0.00
                         0.00 0.66
                                  0.66
                                                      0.00 0.00
                    0.00
                         0.00 0.30
                                  0.30
                                       0.30 0.00
                                                0.09
                                                      0.00 0.00
                                                               0.00
Volume/Cap: 0.30 0.13
Delay/Veh:
          46.0
               4.2
                     0.0
                          0.0
                             7.3
                                  7.3
                                       32.7
                                            0.0
                                                30.8
                                                      0.0 0.0
User DelAdj: 1.00 1.00
                    1.00
                         1.00 1.00
                                  1.00
                                       1.00 1.00
                                                1.00
                                                      1.00 1.00
                                                              1.00
AdjDel/Veh: 46.0
                     0.0
                          0.0
                             7.3
                                   7.3
                                       32.7
                                            0.0
                                                30.8
                                                      0.0
                                                          0.0
                                                                0.0
               4.2
                                          C
                                                   С
                                                                 Α
                      Α
                           Α
                               A
                                     Α
                                              Α
                                                        Α
                                                            Α
LOS by Move:
             D
                 Α
                                          3
                                              0
                      0
                           0
HCM2kAvqQ:
Note: Queue reported is the number of cars per lane.
**********************************
```

Appendix F, Traffic Impact Analysis - page 494 City of Huntington Beach - DTSP Update Program Environmental Impact Report Cumulative (2020) + ProjectWed Jan 7, 2009 09:49:34

Page 1-1

Huntington Beach Traffic Impact Analysis Cumulative (2020) + Project PM Alt 2 with cross traffic

Scenario Report

Cumulative (2020) + Project PM (Alt 2 w/cross) Scenario:

Command:

Cumulative (2020) + Project PM (Alt 2 w/cross)

Cumulative (2020) + Project (Alt 2 w/cross PM)

Geometry:

General Plan Build-Out

Impact Fee:

Trip Generation:

Trip Distribution:

Paths:

Default Path

Paths: Default Path Routes: Default E Configuration: Existing Default Route Cumulative (2020) + ProjectWed Jan 7, 2009 09:49:34 Page 2-1

_____ Huntington Beach Traffic Impact Analysis

Cumulative (2020) + Project PM Alt 2 with cross traffic

Intersection		Base Del/ V/			Future Del/ V/		Change in				
			LO	S Veh	•	L	OS Veh	C		111	
#	5	Pacific Coast Hwy / 9th St	A	3.6	0.654	A	3.6	0.654	+	0.000	D/V
#	6	Pacific Coast Hwy / 6th St	D	45.1	0.991	D	45.1	0.991	+	0.000	D/V
#	7	Pacific Coast Hwy / Main St	A	8.9	0.478	A	8.9	0.478	+	0.000	D/V
#	8	Pacific Coast Hwy / 1st St	F	135.0	1.219	F	135.0	1.219	+	0.000	D/V
#	9	Pacific Coast Hwy / Huntington	В	10.0	0.697	В	10.0	0.697	+	0.000	D/V
#	16	Main St / Adams Ave	С	21.4	0.736	С	21.4	0.736	+	0.000	D/V
#	17	Main St / Walnut Ave	A	7.5	0.118	A	7.5	0.118	+	0.000	V/C
#	18	Main St / Olive Ave	A	8.3	0.264	A	8.3	0.264	+	0.000	V/C
#	19	Main St / 6th St	В	16.2	0.374	В	16.2	0.374	+	0.000	D/V
#	20	Lake St / 6th St	В	11.1	0.439	В	11.1	0.439	+	0.000	V/C
#	21	Lake St / Orange Ave	F	55.0	1.097	F	55.0	1.097	+	0.000	V/C
#	22	1st St / Orange Ave & Atlanta	С	23.2	0.467	С	23.2	0.467	+	0.000	D/A
#	24	Beach Blvd / Pacific View Ave	В	12.2	0.366	В	12.2	0.366	+	0.000	D/V

```
Cumulative (2020) + ProjectWed Jan 7, 2009 09:49:34
                                                      Page 3-1
Huntington Beach Traffic Impact Analysis
        Cumulative (2020) + Project PM Alt 2 with cross traffic
        Level Of Service Computation Report
         2000 HCM Operations Method (Future Volume Alternative)
***********************************
Intersection #5 Pacific Coast Hwy / 9th St
***********************************
Cycle (sec):
                100
                               Critical Vol./Cap.(X):
               5 (Y+R=4.0 sec) Average Delay (sec/veh):
Loss Time (sec):
Optimal Cycle:
                               Level Of Service:
          Pacific Coast Hwy
Street Name:
                                               9th St
          North Bound South Bound East Bound
L - T - R L - T - R L
Approach:
                                                    West Bound
Movement:
                                                  L - T - R
-----|
                        Protected Protected
            Protected
Control:
                                                    Protected
                           Include
                                        Include
              Include
Rights:
                                                      Include
            0 0 0
                         0 0 0
                                       0 0 0
Min. Green:
                        1 0 2 0 0
           0 0 2 0 1
                                     0 0 0 0 0
                                                   1 0 0 0 1
Volume Module:
            0 1950
                    38
                         23 1476
                                  0
                                       0
                                           0
Base Vol:
                                               0
                                                    59
          1.00 1.00 1.00
                       1.00 1.00
                               1.00
                                    1.00 1.00
Growth Adj:
                                             1.00
                                                  1.00 1.00
                                                           1.00
Initial Bse:
            0 1950
                    38
                         23 1476
                                0
                                       0
                                           0
                                                0
                                                    59
                                                            23
                     0
Added Vol:
            O
                0
                         0
                             0
                                  0
                                       0
                                           0
                                                0
                                                    0
                                                             0
PasserByVol:
            0
                0
                     0
                         0
                             0
                                  0
                                       0
                                           0
                                                0
                                                    0
                                                        Ω
                                                             0
            0 1950
                         23 1476
Initial Fut:
                    38
                                  0
                                       0
                                           0
                                                0
                                                    59
                                                        0
                                                            23
          1.00 1.00 1.00
                       1.00 1.00 1.00
User Adj:
                                    1.00 1.00
                                             1.00
                                                  1.00 1.00
                                     1.00 1.00
PHF Adj:
          1.00 1.00
                 1.00
                       1.00 1.00
                                1.00
                                             1.00
                                                  1.00 1.00
            0 1950
PHF Volume:
                    38
                         23 1476
                                  0
                                       0
                                           0
                                               0
                                                    59
                                                            23
Reduct Vol:
            0
                0
                    0
                         0
                           0
                                  0
                                       0
                                           0
                                                0
                                                    0
                                                        0
                                                             0
Reduced Vol:
            0 1950
                    38
                         23 1476
                                  0
                                       0
                                           0
                                                0
                                                    59
                                                            23
                                                        0
PCE Adj:
          1.00 1.00
                 1.00
                      1.00 1.00
                               1.00
                                    1.00 1.00
                                             1.00
                                                  1.00 1.00
MLF Adj:
          1.00 1.00
                  1.00
                       1.00 1.00
                                1.00
                                     1.00 1.00
                                             1.00
                                                  1.00 1.00
FinalVolume:
            0 1950
                    38
                         23 1476
                                  0
                                       0
                                           0
                                               0
                                                    59
                                                        0
-----||-----||-----||-----|
Saturation Flow Module:
         1700 1700 1700
                       1700 1700 1700
                                    1700 1700
                                             1700
                                                  1700 1700
Sat/Lane:
         1.00 1.00 1.00 1.00 1.00
Adjustment:
                               1.00
                                    1.00 1.00
                                             1.00
                                                  1.00 1.00
                                                           1.00
Lanes:
          1.00 0.00
                                                          1.00
            0 3400 1700 1700 3400
Final Sat.:
                               0
                                       0 0
                                               0 1700 0
-----||-----||-----||------|
Capacity Analysis Module:
Vol/Sat:
          0.00 0.57 0.02
                       0.01 0.43 0.00 0.00 0.00 0.00
                                                  0.03 0.00 0.01
              ****
                       ****
                                                  ***
Crit Moves:
Green/Cycle: 0.00 0.88 0.88
                       0.02 0.90
                               0.00
                                    0.00 0.00
                                             0.00
                                                  0.05 0.00
                                                          0.05
Volume/Cap: 0.00 0.65
                  0.03
                       0.65 0.48
                               0.00
                                    0.00 0.00
                                             0.00
                                                  0.65 0.00
                                                          0.26
Delay/Veh:
          0.0 2.3
                  0.8
                       85.3 1.1
                                0.0
                                     0.0 0.0
                                              0.0
                                                  62.5
                                                      0.0
User DelAdj: 1.00 1.00
                  1.00
                       1.00 1.00
                               1.00 1.00 1.00
                                             1.00
                                                  1.00 1.00
          0.0 2.3
                   0.8
                                         0.0
                                                       0.0
AdjDel/Veh:
                       85.3
                            1.1
                                0.0
                                     0.0
                                              0.0
                                                  62.5
                                                           47.0
LOS by Move:
            Α
                Α
                     Α
                         F
                             Α
                                  Α
                                       Α
                                           Α
                                               Α
                                                    Ε
                                                        Α
                                                             D
HCM2kAvq0:
            0
               10
                     0
                         2
                             5
                                  0
                                       0
                                          0
                                               0
                                                    3
***********************************
Note: Queue reported is the number of cars per lane.
**********************************
```

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Cumulative (2020) + ProjectWed Jan 7, 2009 09:49:34 Page 4-1
______
              Huntington Beach Traffic Impact Analysis
        Cumulative (2020) + Project PM Alt 2 with cross traffic
                Level Of Service Computation Report
         2000 HCM Operations Method (Future Volume Alternative)
*************************************
Intersection #6 Pacific Coast Hwy / 6th St
*******************************
               100
Cycle (sec):
                             Critical Vol./Cap.(X):
Loss Time (sec): 31 (Y+R=4.0 sec)
Optimal Cycle: 156
              31 (Y+R=4.0 sec) Average Delay (sec/veh):
                                                     45.1
                             Level Of Service:
**********************************
                                       6th St
Street Name: Pacific Coast Hwy
         North Bound South Bound East Bound West Bound L - T - R L - T - R L - T - I
Approach:
Movement:
                                               L - T - R
Protected Permitted
           Protected
                                                 Permitted
Control:
             Include
                          Include
Rights:
                                     Include
                                                   Include
                        0 0 0
Min. Green:
           0 0 0
                                     0 0 0
          1 0 2 1 0
                       1 0 2 1 0 0 0 1! 0 0
                                                1 0 0 1 0
Volume Module:
Base Vol:
         45 1726
                 131
                       216 1401
                                34
                                    45
                                        23
                                             79
                                                115
         1.00 1.00 1.00
                      1.00 1.00 1.00 1.00 1.00
Growth Adj:
                                           1.00
                                               1.00 1.00
                                                       1.00
Initial Bse: 45 1726
                  131
                       216 1401
                              34
                                   45
                                        23
                                            79
                                                115
                                                        294
                   0
                       0
                                0
                                    0
                                            0
Added Vol:
           Ο
             0
                          0
                                        0
                                                  Ω
                                                     0
                                                          0
PasserByVol:
           0 0
                   0
                       0
                                0
                                    0
                                        0
                                            0
                                                 0
                                                     0
                                                          0
Initial Fut:
           45 1726
                      216 1401
                                34
                                        23
                                             79
                                                115
                 131
                                    45
                                                     34
                                                         294
         1.00 1.00 1.00
                      1.00 1.00 1.00
                                  1.00 1.00 1.00
                                               1.00 1.00 1.00
User Adj:
         1.00 1.00 1.00
                      1.00 1.00 1.00
                                   1.00 1.00
                                           1.00
                                               1.00 1.00 1.00
PHF Adj:
          45 1726
                  131
                       216 1401
                               34
                                    45
                                        23
                                            79
                                                115
PHF Volume:
Reduct Vol:
           0 0
                  0
                        0 0
                                0
                                     0
                                        0
                                             0
                                                 0
                                                     0
                                                          0
Reduced Vol: 45 1726
                  131
                       216 1401
                               34
                                    45
                                        23
                                            79
                                                115
                                                     34
                                                        294
PCE Adj:
       MLF Adj:
         1.00 1.00 1.00
                      1.00 1.00 1.00
                                   1.00 1.00
                                           1.00
                                               1.00 1.00
                                        23
FinalVolume: 45 1726
                 131
                       216 1401
                              34
                                    45
                                           79
                                                115
                                                     34
-----||-----||------|
Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700
                                           1700
                                               1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00
                                           1.00 1.00 1.00
                                                       1.00
Lanes:
         1.00 2.79 0.21 1.00 2.93 0.07 0.30 0.16 0.54
                                               1.00 0.10 0.90
Final Sat.: 1700 4740 360 1700 4979 121
                                  520 266
                                           914 1700 176 1524
-----||-----||------|
Capacity Analysis Module:
Vol/Sat:
         0.03 0.36 0.36 0.13 0.28 0.28 0.09 0.09
                                           0.09
                                               0.07 0.19
                                                        0.19
             ****
                      ****
Crit Moves:
Green/Cycle: 0.04 0.37 0.37 0.13 0.45 0.45 0.19 0.19
                                           0.19
                                               0.19 0.19 0.19
Volume/Cap: 0.62 0.99 0.99 0.99 0.62 0.62
                                   0.44 0.44
                                           0.44
                                               0.35 0.99
         62.6 50.2 50.2 101.9 21.4 21.4
                                  36.5 36.5
                                           36.5
                                               35.4 87.2 87.2
Delay/Veh:
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00
                                          1.00
                                               1.00 1.00
AdjDel/Veh: 62.6 50.2 50.2 101.9 21.4 21.4
                                   36.5 36.5
                                           36.5
                                               35.4 87.2
                                                        87.2
LOS by Move: E
             D
                   D
                       F C
                               С
                                    D
                                       D
                                             D
                                                  D
                                                     \mathbf{F}
                                                          \mathbf{F}
                              12
HCM2kAvqQ:
           2
              26
                   26
                       11 12
                                    4
                                        4
                                             4
                                                  3
**************************
Note: Queue reported is the number of cars per lane.
*******************************
```

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Cumulative (2020) + ProjectWed Jan 7, 2009 09:49:34 Page 5-1
             ......
              Huntington Beach Traffic Impact Analysis
        Cumulative (2020) + Project PM Alt 2 with cross traffic
                Level Of Service Computation Report
         2000 HCM Operations Method (Future Volume Alternative)
 ***************
Intersection #7 Pacific Coast Hwy / Main St
*****************
               100
                              Critical Vol./Cap.(X):
Cycle (sec):
               31 (Y+R=4.0 sec) Average Delay (sec/veh):
                                                     8.9
Loss Time (sec):
                74
                             Level Of Service:
Optimal Cycle:
****************
           Pacific Coast Hwy
                                            Main St
Street Name:
                       South Bound
                                   East Bound
           North Bound
                                                  West Bound
Approach:
                      L - T - R L - T - R
         L - T - R
                                                L - T - R
Movement:
-----||-----||-----||-----|
                       Protected
                                     Protected
                                                  Protected
            Protected
Control:
                                       Include
                                                    Include
Rights:
             Include
                          Include
                                     0 0
                        0 0 0
                                                    0
                                                          0
Min. Green:
            0 0 0
                                             0
                                                  0
          1 0 3 0 1 1 0 3 0 0
                                    0 0 0 0 0
                                                 1 0 0 0 1
Volume Module:
           45 1681
                 0
                        0 1354
                                 0
                                     0
                                         0
                                              0
Base Vol:
                              1.00
                      1.00 1.00
                                   1.00 1.00
                                           1.00
                                                1.00 1.00
Growth Adj: 1.00 1.00 1.00
Initial Bse:
           45 1681
                    0
                        0 1354
                                 0
                                     0
                                         0
                                              0
                                                           0
           0
               0
                    0
                        0
                            0
                                 0
                                     0
                                         0
                                              0
                                                  0
                                                           0
Added Vol:
                            0
                                 0
                                     0
                                         0
                                              0
                                                  0
                                                           0
PasserByVol:
           0
               0
                    0
                        0
                                 0
                                     0
                                         0
                                              0
                                                  0
                                                           O
                    0
                         0 1354
Initial Fut:
           45 1681
                      1.00 1.00 1.00
                                   1.00 1.00
                                           1.00
                                                1.00 1.00
         1.00 1.00 1.00
User Adj:
                      1.00 1.00 1.00
                                   1.00 1.00
                                           1.00
                                                1.00 1.00
PHF Adj:
          1.00 1.00
                  1.00
PHF Volume:
           45 1681
                    0
                         0 1354
                                 0
                                     0
                                       0
                                              0
                                                  0
                                                           0
                    0
                         0
                                 0
                                     O
                                         0
                                              0
                                                  Λ
                                                      Ω
                                                           Λ
Reduct Vol:
           0
               0
                            0
Reduced Vol:
                                     0
                                              0
                                                           0
           45 1681
                    0
                         0 1354
                                 0
                                         0
                                           1.00
                                                1.00 1.00
                      1.00 1.00 1.00
                                   1.00 1.00
PCE Adj:
         1.00 1.00
                 1.00
                      1.00 1.00 1.00
                                   1.00 1.00
                                           1.00
                                                1.00 1.00
         1.00 1.00 1.00
MLF Adj:
                                         0
                                                      0
                                 0
                                     0
                                              0
                                                  0
FinalVolume: 45 1681
                    0
                        0 1354
Saturation Flow Module:
                                           1700 1700 1700
         1700
Sat/Lane:
                                           1.00 1.00 1.00
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00
                                                        1.00
         1.00 3.00 1.00 1.00 3.00 0.00 0.00 0.00
                                           0.00 1.00 0.00
Lanes:
Final Sat.: 1700 5100 1700 1700 5100 0
                                     0 0
                                           0 1700
_____|
Capacity Analysis Module:
                                  0.00 0.00 0.00 0.00 0.00 0.00
         0.03 0.33
                      0.00 0.27 0.00
Vol/Sat:
                  0.00
                      ***
Crit Moves:
             ****
Green/Cycle: 0.06 0.69
                  0.00 0.00 0.63
                              0.00
                                   0.00 0.00
                                           0.00 0.00 0.00
                                                        0.00
Volume/Cap: 0.42 0.48
                  0.00
                      0.00 0.42
                               0.00
                                   0.00 0.00
                                           0.00
                                                0.00 0.00
                                                        0.00
                       0.0 9.5
                               0.0
                                    0.0 0.0
                                            0.0
                                                 0.0 0.0
Delay/Veh:
         47.8
             7.3
                  0.0
                      1.00 1.00 1.00 1.00 1.00
                                           1.00
                                               1.00 1.00
User DelAdj: 1.00 1.00
                 1.00
                                                        1.00
AdjDel/Veh: 47.8 7.3
                   0.0
                       0.0 9.5
                               0.0
                                    0.0 0.0
                                            0.0
                                                 0.0
                                                    0.0
           D
                        Α
                            Α
                                 Α
                                     Α
                                              Α
                                                  Α
                                                      Α
                                                          Α
LOS by Move:
               Α
                    Α
                  0
                            7 0
                                     0
                                         0
                                              0
HCM2kAvqQ:
            2
              8
                         0
*************************
Note: Queue reported is the number of cars per lane.
**********************
```

```
Cumulative (2020) + ProjectWed Jan 7, 2009 09:49:34
Huntington Beach Traffic Impact Analysis
        Cumulative (2020) + Project PM Alt 2 with cross traffic
     ______
                 Level Of Service Computation Report
         2000 HCM Operations Method (Future Volume Alternative)
Intersection #8 Pacific Coast Hwy / 1st St
****************************
                100
                               Critical Vol./Cap.(X):
Cycle (sec):
                31 (Y+R=4.0 sec) Average Delay (sec/veh):
                                                        135.0
Loss Time (sec):
               180
                               Level Of Service:
Optimal Cycle:
*************************
Street Name:
               Pacific Coast Hwy
                                               1st St
                        South Bound
                                       East Bound
           North Bound
                                                     West Bound
                       L - T - R
Movement:
           L - T - R
                                      L - T - R
                                                   L - T - R
Split Phase
           Split Phase
                                      Split Phase
                                                    Split Phase
Control:
Rights:
              Include
                           Include
                                         Include
                                                      Include
Min. Green:
            0
              0
                     0
                          0
                           0
                                  0
                                       0
                                         0
                                               0
                                                     0
                                                       0
                                                             0
           1 0 2 1 0
                        1 0 2 1 0
                                      1 1 0 0 1
                                                   1 1 0 0 2
Volume Module:
           56 1737
Base Vol:
                   366
                        226 1252
                                  23
                                      79
                                          45
                                               68
                                                   437
                                                        34
                                                            176
Growth Adj:
          1.00 1.00
                  1.00
                       1.00 1.00
                                1.00
                                     1.00 1.00
                                              1.00
                                                  1.00 1.00
                                                           1.00
Initial Bse:
           56 1737
                   366
                        226 1252
                                  23
                                      79
                                          45
                                               68
                                                   437
                                                            176
                     0
                                  0
                                       0
                                           0
                                                0
Added Vol:
            0
                0
                          0
                              0
                                                     0
                                                         0
                                                             0
                     0
                          0
                              0
                                   0
                                       0
                                           0
                                                0
                                                     0
                                                         0
                                                             0
PasserByVol:
            0
                0
Initial Fut:
           56 1737
                   366
                        226 1252
                                  23
                                      79
                                          45
                                               68
                                                   437
                                                        34
                                1.00
          1.00 1.00
                       1.00 1.00
                                     1.00 1.00
User Adj:
                  1.00
                                             1.00
                                                  1.00 1.00
PHF Adj:
          1.00 1.00
                   1.00
                       1.00 1.00
                                1.00
                                     1.00 1.00
                                              1.00
                                                  1.00 1.00
                                                           1.00
PHF Volume:
           56 1737
                    366
                        226 1252
                                  23
                                       79
                                          45
                                               68
                                                   437
                                                        34
                                                            176
Reduct Vol:
            0
                     0
                          0
                                  0
                                       0
                                           0
                                                0
                                                     0
                                                         0
Reduced Vol:
                        226 1252
                                  23
                                       79
           56 1737
                   366
                                          45
                                               68
                                                   437
                                                        34
                                                            176
PCE Adj:
                                                           1.00
          1.00 1.00
                  1.00
                       1.00 1.00
                                1.00
                                     1.00 1.00
                                             1.00
                                                  1.00 1.00
                  1.00
                                1.00
                                     1.00 1.00
                                              1.00
MLF Adj:
          1.00 1.00
                       1.00 1.00
                                                  1.00 1.00
                                                           1.00
FinalVolume:
           56 1737
                   366
                        226 1252
                                  23
                                      79
                                         45
                                               68
                                                   437
-----||-----||-----|
Saturation Flow Module:
          1700 1700
Sat/Lane:
                                                           1700
                               1.00 1.00 1.00
          1.00 1.00 1.00
                       1.00 1.00
                                              1.00
                                                  1.00 1.00
Adjustment:
          1.00 2.48 0.52
                       1.00 2.95 0.05 1.27 0.73
                                              1.00
Lanes:
                                                  1.86 0.14
                                                           2.00
Final Sat.:
         1700 4212
                  888 1700 5008
                                92 2166 1234 1700 3155 245
-----| -----| ------| ------| -------|
Capacity Analysis Module:
Vol/Sat:
                       0.13 0.25
                               0.25 0.04 0.04
                                              0.04
                                                  0.14 0.14
          0.03 0.41 0.41
                                              ***
              ****
                           ****
Crit Moves:
Green/Cycle: 0.34 0.34 0.34
                       0.21 0.21
                               0.21
                                     0.03 0.03
                                              0.03
                                                  0.11 0.11
                                                          0.11
                  1.22
                       0.65 1.22
                               1.22 1.11 1.11
Volume/Cap: 0.10 1.22
                                              1.22
                                                  1.22 1.22
              137 137.0
                           147 146.9 166.6
          22.7
                       40.7
                                         167 239.4 164.0
Delay/Veh:
User DelAdj: 1.00 1.00 1.00
                       1.00 1.00
                               1.00 1.00 1.00 1.00
                                                 1.00 1.00
AdjDel/Veh: 22.7 137 137.0
                       40.7
                            147 146.9 166.6 167 239.4 164.0
                                                       164
                     F
                                  F
                                       F
LOS by Move:
           С
                F
                          D
                             F
                                           F
                                                \mathbf{F}
                                                     F
                                                         F
                                                             D
                    40
                          7
                             25
                                  25
                                       5
                                           5
                                                6
            1
               40
*****************************
Note: Queue reported is the number of cars per lane.
*******************************
```

```
Cumulative (2020) + ProjectWed Jan 7, 2009 09:49:34
                                                                                                    Page 7-1
Huntington Beach Traffic Impact Analysis
               Cumulative (2020) + Project PM Alt 2 with cross traffic
                         _____
                               Level Of Service Computation Report
                 2000 HCM Operations Method (Future Volume Alternative)
**************************
Intersection #9 Pacific Coast Hwy / Huntington St
*****************
                              100
                                                          Critical Vol./Cap.(X):
Cycle (sec):
                              5 (Y+R=4.0 sec) Average Delay (sec/veh):
                                                                                                        10.0
Loss Time (sec):
                               39
Optimal Cycle:
                                                         Level Of Service:
******************
                           Pacific Coast Hwy
                                                                                Huntington St
Street Name:
                                            South Bound
                                                                     East Bound
                    North Bound
                                                                                                West Bound
Approach:
                                           L - T - R L - T - R
                   L - T - R
                                                                                            L - T - R
Movement:
-----|
                                               Protected
                      Protected
                                                                       Permitted
                                                                                                 Permitted
                         Include
                                                  Include
                                                                          Include
                                                                                                    Include
Rights:
                       0 0 0
                                               0 0 0
                                                                       0 0
                                                                                       0
                                                                                                 Ω
                                                                                                      0
                                                                                                                 0
Min. Green:
                    1 0 2 0 1
                                            1 0 2 0 1
                                                                     0 1 0 1 0
-----||-----||-----||-----||------|
Volume Module:
Base Vol:
                     45 1949
                                    213
                                              56 1424
                                                              11
                                                                       45
                                                                              56
                                                                                       90
                                                                                              156
                                                                                                       34
                                                                                                                34
Growth Adj:
                  1.00 1.00
                                  1.00
                                           1.00 1.00
                                                           1.00
                                                                   1.00 1.00
                                                                                    1.00
                                                                                            1.00 1.00
                                              56 1424
                                                                       45
                                                                              56
                                                                                       90
                                                                                              156
                                                                                                                34
Initial Bse:
                     45 1949
                                    213
                                                              11
                                                                                                       34
                                       0
                                                               0
                                                                        0
                                                                               0
                                                                                        0
                                                                                                 0
                                                                                                                 0
Added Vol:
                      0
                              0
                                               0
                                                                        0
                                                                               0
                                                                                        0
                                                                                                 0
                                                                                                        0
                                                                                                                 0
                              0
                                       0
                                               0
                                                       0
                                                               0
PasserByVol:
                       0
Initial Fut:
                     45 1949
                                    213
                                              56 1424
                                                              11
                                                                       45
                                                                              56
                                                                                       90
                                                                                              156
                                                                                                       34
User Adj:
                  1.00 1.00
                                  1.00
                                           1.00 1.00
                                                         1.00
                                                                    1.00 1.00
                                                                                   1.00
                                                                                            1.00 1.00
                  1.00 1.00
                                  1.00
                                           1.00 1.00
                                                           1.00
                                                                    1.00 1.00
                                                                                    1.00
                                                                                             1.00 1.00
PHF Adj:
                                                                       45
                                                                                              156
                     45 1949
                                    213
                                              56 1424
                                                              11
                                                                              56
                                                                                       90
                                                                                                       34
PHF Volume:
                                               0
                                                              0
                                                                        0
                                                                               0
                                                                                       0
                                                                                                 0
                                                                                                        0
                                                                                                                 0
Reduct Vol:
                      0
                              0
                                     0
                                                                              56
                                                                                                       34
                                                                                                                34
Reduced Vol:
                     45 1949
                                    213
                                              56 1424
                                                              11
                                                                       45
                                                                                       90
                                                                                              156
                                                         1.00
                                                                                                           1.00
PCE Adj:
                  1.00 1.00 1.00
                                          1.00 1.00
                                                                   1.00 1.00
                                                                                   1.00
                                                                                            1.00 1.00
                                           1.00 1.00
                                                           1.00
                                                                    1.00 1.00
                                                                                    1.00
                                                                                            1.00 1.00
MLF Adj:
                  1.00 1.00
                                 1.00
                                    213
                                              56 1424
                                                              11
                                                                       45
                                                                              56
                                                                                       90
                                                                                              156
                     45 1949
FinalVolume:
_____| ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ___ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ___ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ___ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ___ | ____ | ___ | ____ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | __ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ____ | ___ | ___ | ___ | ___ 
Saturation Flow Module:
                                                                                            1700 1700
Sat/Lane:
                  1700 1700 1700
                                           1700 1700
                                                           1700 1700 1700
                                                                                    1700
                                                                                                             1700
                  1.00 1.00
                                  1.00
                                           1.00 1.00
                                                           1.00 1.00 1.00
                                                                                    1.00
                                                                                            1.00 1.00
Adjustment:
                                           1.00 2.00
                                                          1.00 0.47 0.59
                                                                                    0.94
                                                                                            1.64 0.36
Lanes:
                  1.00 2.00
                                  1.00
                                                                                                            1.00
Final Sat.:
                1700 3400 1700 1700 3400 1700
                                                                   801 997
                                                                                    1602
                                                                                            2792 608
-----|
Capacity Analysis Module:
                                                                    0.06 0.06
Vol/Sat:
                  0.03 0.57 0.13
                                           0.03 0.42 0.01
                                                                                    0.06
                                                                                            0.06 0.06 0.02
                          ****
                                           ***
Crit Moves:
Green/Cycle: 0.05 0.82
                                 0.82
                                           0.05 0.82
                                                           0.82
                                                                    0.08 0.08
                                                                                    0.08
                                                                                             0.08 0.08
Volume/Cap: 0.51 0.70
                                  0.15
                                           0.70 0.51
                                                           0.01
                                                                    0.70 0.70
                                                                                    0.70
                                                                                             0.69 0.69
                  51.2
                                    1.9
                                           70.5 3.0
                                                            1.7
                                                                    52.5 52.5
                                                                                    52.5
                                                                                             52.2 52.2
Delay/Veh:
                          4.5
                                                                   1.00 1.00
                                                                                    1.00
                                                                                            1.00 1.00
                                 1.00
                                           1.00 1.00
                                                          1.00
User DelAdj: 1.00 1.00
AdjDel/Veh: 51.2 4.5
                                                                    52.5 52.5
                                    1.9
                                           70.5
                                                    3.0
                                                            1.7
                                                                                    52.5
                                                                                             52.2 52.2
                                               Ε
                                                                        D
                                                                                        D
                                                                                                 D
                                                                                                        D
                                                                                                                 D
                              Α
                                       Α
                                                       Α
                                                               Α
                                                                               D
LOS by Move:
                       D
HCM2kAvq0:
                                       1
                                                3
                                                               0
                                                                        4
                       2
                            13
***********************
Note: Queue reported is the number of cars per lane.
```

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Cumulative (2020) + ProjectWed Jan 7, 2009 09:49:35
                                                       Page 8-1
______
               Huntington Beach Traffic Impact Analysis
        Cumulative (2020) + Project PM Alt 2 with cross traffic
                 Level Of Service Computation Report
         2000 HCM Operations Method (Future Volume Alternative)
********************
Intersection #16 Main St / Adams Ave
******************
                100
                               Critical Vol./Cap.(X):
Cycle (sec):
                                                        0.736
               5 (Y+R=4.0 sec) Average Delay (sec/veh):
Loss Time (sec):
                                                         21.4
Optimal Cycle:
                               Level Of Service:
********************
                   Main St
                                              Adams Ave
Street Name:
                                     East Bound
                       South Bound East Bound
L - T - R L - T - R
           North Bound South Bound
                                                     West Bound
Approach:
Movement:
           L - T - R
                                                   L - T - R
_____|
            Permitted
                         Permitted
                                       Permitted
                                                     Permitted
Control:
                                         Include
                                                       Include
              Include
                           Include
Rights:
                          0 0 0
            0 0 0
                                       0 0
                                               0
Min. Green:
                        1 0 1 0 1
                                      0 1 0 0 1
                                                   0 1 0 0 1
           1 0 1 0 1
Volume Module:
           11 582
                   129
                         82 641
                                  11
                                       0 180
                                               11
                                                   231
Base Vol:
                   1.00
                       1.00 1.00
                                     1.00 1.00
                                                   1.00 1.00
          1.00 1.00
                                1.00
                                              1.00
                                                           1.00
Growth Adj:
Initial Bse:
           11 582
                    129
                         82
                            641
                                  11
                                       0
                                         180
                                               11
                                                   231
                                                       316
                                                             68
                     0
                          0
                                   0
                                       0
                                                0
                                                     0
                                                         0
Added Vol:
            Ω
                0
                              O
                                           0
                                                              0
PasserByVol:
            0
                0
                     0
                          0
                              0
                                   0
                                           0
                                                0
                                                     0
                                                         0
                                                              0
                                       0
                                               11
                                                   231
                                                       316
Initial Fut:
            11 582
                   129
                         82
                            641
                                  11
                                         180
                                                             68
          1.00 1.00
                   1.00
                       1.00 1.00
                                1.00
                                     1.00 1.00
                                              1.00
                                                   1.00 1.00
User Adj:
                                1.00
                   1.00
                       1.00 1.00
                                     1.00 1.00
                                              1.00
                                                   1.00 1.00
                                                           1.00
          1.00 1.00
PHF Adj:
                   129
                         82
                                  11
                                       0
                                          180
                                               11
                                                   231
PHF Volume:
           11
               582
                            641
                                       0
                                                     0
                                                              0
Reduct Vol:
            0
                0
                     0
                          0
                             0
                                   0
                                           0
                                                0
                                                         0
Reduced Vol:
           11 582
                   129
                         82
                            641
                                  11
                                       0
                                         180
                                               11
                                                   231
                                                       316
                                                             68
                                     1.00 1.00
                                             1.00
                                                  1.00 1.00
PCE Adj:
          1.00 1.00
                  1.00
                       1.00 1.00
                                1.00
                                                           1.00
                                     1.00 1.00
                                                   1.00 1.00
          1.00 1.00
                   1.00
                       1.00 1.00
                                1.00
                                              1.00
MLF Adj:
                                                       316
                   129
                         82 641
                                  11
                                       0 180
                                               11
                                                   231
                                                             68
FinalVolume:
           11 582
-----||-----||-----|
Saturation Flow Module:
          1700 1700 1700
                       1700 1700
                                1700
                                     1700 1700
                                              1700
                                                   1700 1700
Sat/Lane:
          1.00 1.00 1.00
                       1.00 1.00
                                1.00
                                     1.00 1.00
                                              1.00
                                                   1.00 1.00
Adjustment:
                                                           1.00
          1.00 1.00 1.00
Lanes:
                       1.00 1.00
                                1.00 0.00 1.00
                                              1.00
                                                   0.42 0.58
                                                           1.00
Final Sat.: 1700 1700 1700
                       1700 1700 1700
                                       0 1700
                                              1700
                                                  718 982
_____|
Capacity Analysis Module:
Vol/Sat:
          0.01 0.34 0.08
                       0.05 0.38
                                0.01 0.00 0.11 0.01
                                                   0.32 0.32
                            ***
Crit Moves:
Green/Cycle: 0.51 0.51
                  0.51
                       0.51 0.51
                               0.51
                                     0.00 0.44
                                              0.44
                                                   0.44 0.44
                                                           0.44
                               0.01
                                              0.01
Volume/Cap: 0.01 0.67
                   0.15
                       0.09 0.74
                                     0.000.24
                                                   0.74 0.74
                                                           0.09
          12.0 20.1
                  12.9
                       12.5 22.4 12.0
                                     0.0 17.9
                                              15.9
                                                   27.2 27.2
Delay/Veh:
User DelAdj: 1.00 1.00
                  1.00
                       1.00 1.00
                               1.00
                                    1.00 1.00
                                              1.00
                                                   1.00 1.00
AdjDel/Veh: 12.0 20.1
                   12.9
                        12.5 22.4
                                12.0
                                      0.0 17.9
                                              15.9
                                                   27.2 27.2
                                                            16.5
                                                     С
LOS by Move:
            В
                С
                     В
                          В
                             С
                                   В
                                       Α
                                           В
                                                В
                                                         С
                                                              В
                             16
                                                        15
                14
                     2
                          1
                                  0
                                       0
                                           3
                                                0
                                                    15
HCM2kAvqQ:
            0
******************
Note: Queue reported is the number of cars per lane.
********************
```

```
Cumulative (2020) + ProjectWed Jan 7, 2009 09:49:35
                                                Page 9-1
______
             Huntington Beach Traffic Impact Analysis
       Cumulative (2020) + Project PM Alt 2 with cross traffic
               Level Of Service Computation Report
        2000 HCM 4-Way Stop Method (Future Volume Alternative)
********************************
Intersection #17 Main St / Walnut Ave
**************************
              100
                            Critical Vol./Cap.(X):
Cycle (sec):
           0 (Y+R=4.0 sec) Average Delay (sec/veh):
0 Level Of Service:
Loss Time (sec):
Optimal Cycle:
                            Level Of Service:
******************************
           Main St
Street Name:
                                        Walnut Ave
         North Bound South Bound East Bound L - T - R L - T - R
Approach:
                                              West Bound
Movement:
                                             L - T - R
Stop Sign Stop Sign Stop Sign
                       Include
           Include
Rights:
                                  Include
                                               Include
           0 0 0
                       0 0 0
                                  0 0 0
Min. Green:
         0 0 1! 0 0
                     0 0 1! 0 0 0 0 1 0 0 0 1 0 0
Volume Module:
Base Vol:
           0
              0
                  0
                       0
                          0
                             0
                                   0
                                     94
                                          0
                                               0 106
Growth Adj:
         1.00
                                            1.00 1.00
Initial Bse: 0
                  0
                          0
                            0
              0
                       0
                                   0
                                     94
                                          0
                                               0 106
                   0
                              0
Added Vol:
           0
              0
                       0
                          0
                                   0
                                      0
                                          0
                                               0
                                                  0
                                                      0
                   0
                       0
                          0
                              0
                                      0
PasserByVol:
           0
              0
                                   0
                                                  0
Initial Fut:
           0
              0
                   0
                       0
                          0
                              0
                                   0
                                     94
                                          0
                                               0 106
User Adj:
         1.00 1.00 1.00
                    1.00 1.00
                            1.00
                                1.00 1.00 1.00
                                            1.00 1.00
         1.00 1.00
                1.00
                     1.00 1.00
                            1.00
                                 1.00 1.00
                                        1.00
                                             1.00 1.00
PHF Adj:
                0
                       0
                            0
PHF Volume:
           0 0
                                   0
                                     94
                                         0
Reduct Vol:
           0
                  0
                       0
                              0
              0
                          0
                                   0
                                      0
                                          0
                                               0
                                                  0
                                                      0
Reduced Vol:
           0
              0
                  0
                       0
                          0
                              0
                                   0
                                     94
                                          0
                                               0 106
                            1.00 1.00 1.00 1.00
PCE Adj:
         1.00 1.00 1.00 1.00 1.00
                                            1.00 1.00
         1.00 1.00 1.00 1.00 1.00
                                1.00 1.00
MLF Adj:
                            1.00
                                        1.00
                                             1.00 1.00
                0
                       0
                        0
                              0
                                   0 94
FinalVolume:
           0
              0
                                         0
                                               0 106
-----||-----||------|
Saturation Flow Module:
0.00 \ 1.00 \ 0.00 \ 0.00 \ 1.00 \ 0.00 \ 1.00 \ 0.00 \ 0.00 \ 1.00 \ 0.00
Lanes:
        0 801
                0
                       0 801
                            0 0 898
                                        0
Capacity Analysis Module:
Vol/Sat:
        XXXX
         ****
Crit Moves:
                        ****
                                    ****
                            0.0
Delay/Veh:
         0.0 0.0
                0.0
                     0.0 0.0
                                 0.0 7.5
                                        0.0
                                             0.0 7.5
                                                     0.0
Delay Adj:
         1.00 1.00 1.00
                    1.00 1.00
                            1.00
                                1.00 1.00
                                        1.00
                                            1.00 1.00
AdjDel/Veh: 0.0
             0.0
                 0.0
                     0.0
                         0.0
                             0.0
                                 0.0 7.5
                                         0.0
                                             0.0 7.5
                                                     0.0
                 *
LOS by Move:
              *
                                      Α
                                                  Α
                                     7.5
                                                 7.5
ApproachDel:
           XXXXXX
                      XXXXXX
Delay Adj:
          XXXXX
                      XXXXX
                                    1.00
                                                1.00
                                     7.5
ApprAdjDel:
                                                 7.5
           XXXXXX
                      XXXXXX
LOS by Appr:
                                     Α
                                                  Α
AllWayAvgQ: 0.0 0.0 0.0
                     0.0 0.0 0.0
                                 0.1 0.1
                                         0.1
********************************
Note: Queue reported is the number of cars per lane.
```

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Cumulative (2020) + ProjectWed Jan 7, 2009 09:49:35
                                               Page 10-1
Huntington Beach Traffic Impact Analysis
       Cumulative (2020) + Project PM Alt 2 with cross traffic
               Level Of Service Computation Report
        2000 HCM 4-Way Stop Method (Future Volume Alternative)
***********************************
Intersection #18 Main St / Olive Ave
******************************
              100
                            Critical Vol./Cap.(X):
Cycle (sec):
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 0 Level Of Service:
**********************************
Street Name:
                 Main St
                                        Olive Ave
         North Bound South Bound East Bound West Bound L - T - R L - T - R L - T - I
Approach:
Movement:
                                            L - T - R
Stop Sign Stop Sign Stop Sign
            Include
                       Include
                                   Include
Rights:
                                               Include
           0 0 0
                      0 0 0
                                  0 0 0
Min. Green:
         0 0 1! 0 0
                     0 0 1! 0 0 0 0 1 0 0
                                             0 0 1 0 0
Volume Module:
        0
              0
                 0
                       0
                          0
                             0
                                   0 144
Growth Adj: 1.00 1.00 1.00
                     1.00 1.00 1.00 1.00 1.00
                                        1.00 1.00 1.00
                                                    1.00
                0
Initial Bse: 0 0
                       0
                          0
                            0
                                   0
                                    144
                                          0
                                               0 235
Added Vol:
           0
                  0
                       0
                          0
                              0
                                   0
              0
                                      0
                                          0
                                               Ω
                                                  0
                                                      0
PasserByVol:
           0
                  0
                       0
                          0
                                      0
Initial Fut:
                  0
           Ω
              0
                       0
                          0
                              0
                                   0
                                     144
                                          0
                                               0
                                                 235
User Adj:
         1.00 1.00 1.00
                     1.00 1.00 1.00
                                 1.00 1.00 1.00
                                            1.00 1.00
         1.00 1.00
                1.00
                     1.00 1.00
                            1.00
                                 1.00 1.00
                                        1.00
                                             1.00 1.00 1.00
PHF Adj:
PHF Volume: 0 0
                0
                     0
                            0
                                   0
                                     144
                                          0
                                                 235
Reduct Vol:
           0
                  0
              0
                       0
                          0
                              0
                                   0
                                     0
                                          0
                                               0
                                                      0
Reduced Vol:
          0
              0
                  0
                       0
                          0
                              0
                                   0 144
                                          0
                                               0 235
                                                      0
        PCE Adj:
                                1.00 1.00 1.00
MLF Adj:
         1.00 1.00 1.00
                     1.00 1.00 1.00
                                            1.00 1.00 1.00
                0
                       0 0
                                0 144
FinalVolume:
           0
            0
                            0
                                         0
                                               0 235
Saturation Flow Module:
0.00 1.00 0.00 0.00 1.00 0.00 0.00 1.00 0.00 0.00 1.00 0.00
Lanes:
Final Sat.: 0 718
                0 0 718
                            0
                                0 869
                                        0 0 889
-----||-----||-----|
Capacity Analysis Module:
Vol/Sat: xxxx 0.00 xxxx xxxx 0.00 xxxx xxxx 0.17
                                        xxxx xxxx 0.26
Crit Moves:
         ***
                        ****
                                    ***
                                                ****
                0.0
Delay/Veh:
         0.0 0.0
                     0.0 0.0
                            0.0
                                 0.0 7.9
                                        0.0
                                             0.0 8.5
        1.00 1.00 1.00
                           1.00
Delay Adj:
                     1.00 1.00
                                1.00 1.00
                                        1.00
                                             1.00 1.00
                                                    1.00
AdjDel/Veh: 0.0 0.0
                 0.0
                             0.0
                                 0.0 7.9
                                         0.0
                     0.0 0.0
                                             0.0 8.5
                                                     0.0
                 *
                             *
LOS by Move:
                                      Α
                                                  Α
ApproachDel:
                      XXXXXX
                                     7.9
                                                 8.5
           XXXXXX
Delay Adj:
          XXXXX
                                    1.00
                      XXXXX
                                                1.00
ApprAdjDel:
           XXXXXX
                       XXXXXX
                                     7.9
                                                 8.5
LOS by Appr:
                                     Α
                                                  Α
AllWayAvgQ: 0.0 0.0 0.0
                     0.0 0.0 0.0
                                 0.2 0.2
**********************
Note: Queue reported is the number of cars per lane.
```

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Cumulative (2020) + ProjectWed Jan 7, 2009 09:49:35
                                                      Page 11-1
______
               Huntington Beach Traffic Impact Analysis
        Cumulative (2020) + Project PM Alt 2 with cross traffic
                 Level Of Service Computation Report
         2000 HCM Operations Method (Future Volume Alternative)
*************************
Intersection #19 Main St / 6th St
******************
                100
                               Critical Vol./Cap.(X):
Cycle (sec):
              5 (Y+R=4.0 sec) Average Delay (sec/veh):
Loss Time (sec):
                 20
                               Level Of Service:
Optimal Cycle:
******************
                                                6th St
Street Name:
                   Main St
                                      East Bound
Approach:
           North Bound
                        South Bound
                                                    West Bound
                        L - T - R \quad L - T - R
           L - T - R
                                                    L - T - R
Movement:
Permitted
             Permitted
                                       Permitted
                                                     Permitted
Rights:
              Include
                           Include
                                         Include
                                                       Include
                            0 0
                                        0 0
                                                0
                                                        0
                                                              0
            0
              0
                    0
                          0
                                                     Ω
Min. Green:
           1 0 0 1 0
                        1 0 0 1 0
                                      1 0 1 0 1
-----|----|-----|
Volume Module:
Base Vol:
           15 135
                    14
                         34 179
                                 196
                                      229
                                           99
                                                31
                                                     30
                                                         92
                                                              34
Growth Adj:
          1.00 1.00
                   1.00
                        1.00 1.00
                                1.00
                                     1.00 1.00
                                              1.00
                                                   1.00 1.00
                                                            1.00
                                           99
                         34
                            179
                                 196
                                      229
                                                31
                                                     30
                                                         92
                                                              34
Initial Bse:
           15 135
                    14
                     0
                                        0
                                                0
                                                     0
Added Vol:
            0
                0
                          0
                              0
                                   0
                                            0
                                                         0
                                                              0
                     0
                          0
                              0
                                   0
                                        0
                                            0
                                                 0
                                                     0
                                                         0
                                                              0
PasserByVol:
            0
                0
                    14
Initial Fut:
            15 135
                         34
                            179
                                 196
                                      229
                                           99
                                                31
                                                     30
                                                         92
                                                              34
User Adj:
          1.00 1.00
                   1.00
                        1.00 1.00
                                1.00
                                     1.00 1.00
                                              1.00
                                                   1.00 1.00
          1.00 1.00
                   1.00
                        1.00 1.00
                                1.00
                                     1.00 1.00
                                              1.00
                                                   1.00 1.00
                                                            1.00
PHF Adj:
           15 135
                    14
                            179
                                 196
                                      229
                                           99
                                                31
                                                     30
                                                         92
PHF Volume:
                         34
            0
                     0
                          0
                                            0
                                                0
                                                     0
                                                         0
                                                              0
Reduct Vol:
                0
                              0
                                   0
                                        0
                                 196
Reduced Vol:
            15 135
                    14
                         34
                            179
                                      229
                                           99
                                                31
                                                     30
                                                         92
                                                              34
                                1.00
                  1.00
PCE Adj:
          1.00 1.00
                        1.00 1.00
                                     1.00 1.00
                                             1.00
                                                   1.00 1.00
                                                           1.00
          1.00 1.00
                   1.00
                        1.00 1.00
                                              1.00
                                                   1.00 1.00
MLF Adj:
                                1.00
                                     1.00 1.00
                         34 179
                                 196
                                      229
                                           99
                                                31
                                                     30
            15 135
                    14
FinalVolume:
-----|----|----|-----||------|
Saturation Flow Module:
Sat/Lane:
          1700 1700 1700
                        1700 1700
                                1700
                                     1700 1700
                                              1700
                                                   1700 1700
                                                            1700
          1.00 1.00 1.00
                        1.00 1.00
                                1.00
                                     1.00 1.00
                                              1.00
                                                   1.00 1.00
                                                            1.00
Adjustment:
Lanes:
                                0.52
                                              1.00
          1.00 0.91
                  0.09
                        1.00 0.48
                                     1.00 1.00
                                                   1.00 1.00
                                                            1.00
                                889
Final Sat.:
         1700 1540
                   160
                        1700 811
                                     1700 1700
                                              1700
                                                   1700 1700
Capacity Analysis Module:
Vol/Sat:
          0.01 0.09 0.09
                        0.02 0.22
                                0.22
                                     0.13 0.06 0.02
                                                   0.02 0.05
                                                            0.02
Crit Moves:
Green/Cycle: 0.59 0.59
                  0.59
                        0.59 0.59
                                0.59
                                     0.36 0.36
                                              0.36
                                                   0.36 0.36
Volume/Cap: 0.01 0.15
                   0.15
                        0.03 0.37
                                0.37
                                     0.37 0.16
                                              0.05
                                                   0.05 0.15
          8.5
              9.3
                   9.3
                        8.6 11.0
                                11.0
                                     24.0 21.9
                                              20.9
                                                   20.9 21.8
Delay/Veh:
                  1.00
                        1.00 1.00
                                1.00
                                     1.00 1.00
                                              1.00
                                                   1.00 1.00
User DelAdj: 1.00 1.00
AdjDel/Veh:
           8.5 9.3
                    9.3
                         8.6 11.0
                                11.0
                                     24.0 21.9
                                              20.9
                                                   20.9 21.8
                                        С
                                            С
                                                 C
                                                     С
                                                         C
                                                              C
LOS by Move:
                     Α
                          Α
                              В
                                   В
            Α
                Α
                2
                     2
                                   6
                                        5
HCM2kAvq0:
            0
                          0
                              6
                                                 1
*******************
Note: Queue reported is the number of cars per lane.
********************
```

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Cumulative (2020) + ProjectWed Jan 7, 2009 09:49:35
                                                    Page 12-1
_____
              Huntington Beach Traffic Impact Analysis
        Cumulative (2020) + Project PM Alt 2 with cross traffic
      ______
                Level Of Service Computation Report
         2000 HCM 4-Way Stop Method (Future Volume Alternative)
***************************
Intersection #20 Lake St / 6th St
*************************
                100
                              Critical Vol./Cap.(X):
Cycle (sec):
             0 (Y+R=4.0 sec) Average Delay (sec/veh):
Loss Time (sec):
                0
Optimal Cycle:
                              Level Of Service:
*************************
                 Lake St
                                              6th St
Street Name:
                                    East Bound
                       South Bound
Approach:
           North Bound
                                                   West Bound
                       L - T - R L - T - R
          L - T - R
Movement:
                                                  L - T - R
Stop Sign
                                                   Stop Sign
Control:
            Stop Sign
                                      Stop Sign
Rights:
             Include
                         Include
                                       Include
                                                     Include
            0 0
                    0
                         0
                           0
                                0
                                      0 0
                                              0
                                                      0
                                                            0
Min. Green:
                                                   Ω
          1 0 0 1 0
                       1 0 1 0 1
                                     0 1 0 0 1
Volume Module:
Base Vol:
           19 241
                    35
                        34 210
                                 65
                                     41
                                         68
                                              30
                                                  11
                                                      79
                                                           23
Growth Adj:
          1.00 1.00
                 1.00
                       1.00 1.00
                               1.00
                                    1.00 1.00
                                            1.00
                                                 1.00 1.00
             241
                    35
                        34
                           210
                                 65
                                     41
                                         68
                                              30
                                                  11
                                                           23
Initial Bse:
           19
            0
                0
                    0
                         0
                             0
                                 0
                                      0
                                          0
                                              0
                                                   0
                                                            0
Added Vol:
                    0
                         0
                                 0
                                      0
                                          0
                                              0
                                                   0
                                                       0
                                                            0
            0
                0
                             0
PasserByVol:
           19 241
                   35
                          210
                                 65
                                              30
                                                      79
Initial Fut:
                        34
                                     41
                                         68
                                                  11
User Adj:
         1.00 1.00
                  1.00
                       1.00 1.00
                               1.00
                                    1.00 1.00
                                            1.00
                                                 1.00 1.00
                                                         1.00
PHF Adj:
          1.00 1.00
                  1.00
                       1.00 1.00
                               1.00
                                    1.00 1.00
                                            1.00
                                                 1.00 1.00
                                                          1.00
                    35
                                 65
                                              30
                                                   11
                                                      79
                                                           23
           19
              241
                        34
                           210
                                     41
                                         68
PHF Volume:
Reduct Vol:
           0
                0
                    0
                         0
                             0
                                 0
                                      0
                                          0
                                              0
                                                            0
                                              30
                                                      79
                                                           23
Reduced Vol:
           19 241
                        34
                           210
                                 65
                                                  11
                    35
                                     41
                                         68
PCE Adj:
         1.00 1.00
                 1.00
                      1.00 1.00
                               1.00
                                    1.00 1.00
                                            1.00
                                                 1.00 1.00
                                                         1.00
          1.00 1.00
                 1.00
                       1.00 1.00
                               1.00
                                    1.00 1.00
                                            1.00
                                                 1.00 1.00
FinalVolume: 19 241
                   35
                        34 210
                                 65
                                     41
                                         68
                                              30
Saturation Flow Module:
                              1.00 1.00 1.00
                                            1.00 1.00 1.00
Adjustment: 1.00 1.00 1.00 1.00 1.00
                                                         1.00
                               1.00 0.38 0.62
Lanes:
          1.00 0.87 0.13 1.00 1.00
                                            1.00 0.12 0.88
Final Sat.: 565 548
                  80
                      533 581
                               650
                                    198 328
                                            601
                                                   65 464
                                                          593
Capacity Analysis Module:
         0.03 0.44 0.44
                       0.06 0.36 0.10
                                    0.21 0.21
                                            0.05 0.17 0.17 0.04
Vol/Sat:
                                                 ***
             ****
                           ****
                                        ***
Crit Moves:
Delay/Veh:
          9.0 12.3 12.3
                       9.6 11.9
                               8.5
                                    10.6 10.6
                                             8.5
                                                 10.2 10.2
                                                          8.5
                              1.00
                                    1.00 1.00
                                            1.00
Delay Adj:
          1.00 1.00 1.00
                       1.00 1.00
                                                 1.00 1.00
                                                         1.00
AdjDel/Veh:
          9.0 12.3
                  12.3
                        9.6 11.9
                                8.5
                                    10.6 10.6
                                             8.5
                                                 10.2 10.2
                                                          8.5
LOS by Move:
            Α
                В
                    В
                         Α
                             В
                                 Α
                                      В
                                          В
                                              Α
                                                   В
                           10.9
                                        10.2
                                                      9.9
ApproachDel:
             12.1
Delay Adj:
             1.00
                           1.00
                                        1.00
                                                     1.00
                                        10.2
              12.1
                           10.9
                                                      9.9
ApprAdjDel:
LOS by Appr:
                             В
                                          В
                В
                                                       Α
                       0.1 0.5
          0.0 0.7
                   0.7
                                0.1
                                     0.2 0.2
                                             0.0
                                                  0.2 0.2
AllWayAvgQ:
*******************
Note: Queue reported is the number of cars per lane.
```

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Cumulative (2020) + ProjectWed Jan 7, 2009 09:49:35 Page 13-1
_____
              Huntington Beach Traffic Impact Analysis
        Cumulative (2020) + Project PM Alt 2 with cross traffic
                Level Of Service Computation Report
         2000 HCM 4-Way Stop Method (Future Volume Alternative)
********************
Intersection #21 Lake St / Orange Ave
*******************
               100
                              Critical Vol./Cap.(X):
Cycle (sec):
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 0 Level Of Service:
                                                      55.0
*****************
            Lake St
Street Name:
                                           Orange Ave
          North Bound South Bound East Bound L - T - R L - T - R L - T - R
                                                   West Bound
                                                L - T - R
Movement:
Stop Sign Stop Sign Stop Sign Include Include Include
                                                  Stop Sign
                                                    Include
Rights:
Min. Green:
            0 0 0
                        0 0 0
                                     0 0 0
                                                   0 0
          0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0
                                                 0 0 1! 0 0
Volume Module:
           80 146
                            91
                                56
                                     58 331
                                             67
Base Vol:
                   25
                       105
                                                  37 426
                                                         114
                              1.00
                                   1.00 1.00 1.00
                                                1.00 1.00
Growth Adj:
         1.00 1.00 1.00 1.00 1.00
                                                         1.00
Initial Bse:
           80 146
                   25
                       105
                            91
                                56
                                     58
                                        331
                                             67
                                                  37
                                                     426
               0
                   0
                       0
                            0
                                 0
                                      0
                                         0
                                              0
                                                  0
                                                      0
                                                           0
Added Vol:
           0
                                 0
                                      0
                                          0
                                              0
                                                  0
                                                      0
           0
               0
                    0
                         0
                            0
                                                           0
PasserByVol:
                   25
                                56
                                             67
                                                  37
                                                    426
Initial Fut:
           80 146
                      105
                            91
                                     58 331
                                                         114
         1.00 1.00 1.00
                      1.00 1.00 1.00
                                   1.00 1.00 1.00
                                                1.00 1.00 1.00
User Adj:
PHF Adj:
          1.00 1.00
                  1.00
                      1.00 1.00
                               1.00
                                    1.00 1.00
                                            1.00
                                                1.00 1.00
                                                         1.00
PHF Volume:
           80 146
                   25
                       105
                            91
                                56
                                     58
                                        331
                                             67
                                                  37
                                                     426
                                                          114
                   0
                                0
                                     0
                                             0
                                                  0
                                                      0
Reduct Vol:
           0
                0
                         0
                            0
                                          0
Reduced Vol:
                   25
                       105
                            91
                                56
                                     58
                                       331
                                             67
                                                  37
                                                     426
                                                          114
           80 146
PCE Adj:
         1.00 1.00
                 1.00
                      1.00 1.00
                              1.00
                                   1.00 1.00
                                            1.00
                                                1.00 1.00
                                                         1.00
         1.00 1.00 1.00 1.00 1.00
                              1.00
                                   1.00 1.00 1.00
                                                1.00 1.00
                                                        1.00
MLF Adj:
FinalVolume: 80 146
                  25
                       105
                          91
                                56
                                     58 331
                                             67
                                                  37
-----||-----||-----|
Saturation Flow Module:
0.32 0.58 0.10 0.42 0.36 0.22 0.13 0.72 0.15 0.06 0.74
                                                        0.20
Lanes:
Final Sat.: 138 253 43 182 158 97 64 367 74
                                                  34 388
-----||-----||-----|
Capacity Analysis Module:
                      0.58 0.58 0.58 0.90 0.90
        0.58 0.58 0.58
                                            0.90 1.10 1.10 1.10
Vol/Sat:
                          ***
                                       ***
                                                ****
Crit Moves: ****
Delay/Veh:
         20.2 20.2 20.2
                      20.1 20.1
                              20.1
                                   44.2 44.2
                                            44.2 93.9 93.9
         1.00 1.00 1.00
                      1.00 1.00 1.00 1.00 1.00
                                            1.00 1.00 1.00
Delay Adj:
                                                         1.00
         20.2 20.2 20.2
                      20.1 20.1
                               20.1
                                    44.2 44.2
                                            44.2
                                                93.9 93.9
AdjDel/Veh:
LOS by Move:
            C C
                    С
                        С
                          С
                                 C
                                      Ε
                                        Ε
                                              Ε
                                                   F
                                                      F
             20.2
                          20.1
                                       44.2
                                                    93.9
ApproachDel:
                                       1.00
                          1.00
                                                    1.00
             1.00
Delay Adj:
                          20.1
                                       44.2
                                                    93.9
ApprAdjDel:
             20.2
                           С
                                         Ε
LOS by Appr:
                C
                                    4.8 4.8 4.8 12.3 12.3
                 1.1 1.1 1.1 1.1
AllWayAvgQ: 1.1 1.1
*************************
Note: Queue reported is the number of cars per lane.
```

```
Cumulative (2020) + ProjectWed Jan 7, 2009 09:49:35
                                                     Page 14-1
           ______
              Huntington Beach Traffic Impact Analysis
        Cumulative (2020) + Project PM Alt 2 with cross traffic
                 Level Of Service Computation Report
         2000 HCM Operations Method (Future Volume Alternative)
Intersection #22 1st St / Orange Ave & Atlanta Ave
*****************************
                100
                               Critical Vol./Cap.(X):
Cycle (sec):
             5 (Y+R=4.0 sec) Average Delay (sec/veh):
Loss Time (sec):
                                                        23.2
                 23
Optimal Cycle:
                               Level Of Service:
**********************************
Street Name:
                    1st St
                                       Orange Ave & Atlanta Ave
          North Bound
                       South Bound
                                      East Bound
                                                    West Bound
Movement:
          L - T - R
                       L - T - R \quad L - T - R
                                                  L - T - R
Permitted
Control:
             Permitted
                                      Protected
                                                   Protected
Rights:
             Include
                           Include
                                        Include
                                                      Include
Min. Green:
            0 0
                   0
                         0
                            0 0
                                       0 0
                                              0
                                                    Ω
                                                       0
                                                             0
                        1 0 0 0 0
           0 1 0 0 1
                                     1 0 1 1 0
Volume Module:
Base Vol:
          158
               11
                  261
                         11
                             0
                                  0
                                       0 316
                                              219
                                                  225 323
Growth Adj:
          1.00 1.00
                  1.00 1.00 1.00
                               1.00
                                    1.00 1.00
                                             1.00
                                                  1.00 1.00
Initial Bse: 158
               11
                   261
                         11
                                  0
                                       0
                                         316
                                              219
                                                  225
                                                      323
                                                            11
                             0
Added Vol:
            0
                0
                   0
                         0
                             0
                                  0
                                       0
                                           0
                                               0
                                                    0
                                                             0
                    0
                         0
                                  0
PasserByVol:
            0
                0
                             0
                                       0
                                           0
                                               0
                                                    0
                                                        0
                                                             0
Initial Fut: 158
               11
                   261
                             0
                                  0
                                       0
                                        316
                                                  225
                         11
                                              219
                                                      323
User Adj:
          1.00 1.00
                  1.00
                       1.00 1.00
                                1.00
                                    1.00 1.00
                                             1.00
                                                 1.00 1.00
PHF Adj:
          1.00 1.00
                  1.00
                       1.00 1.00
                                1.00
                                    1.00 1.00
                                             1.00
                                                  1.00 1.00
PHF Volume:
           158
               11
                   261
                         11
                                  0
                                       0
                                         316
                                              219
                                                  225
                                                      323
                             0
Reduct Vol:
            0
                0
                   0
                         0
                                  0
                                       0
                             0
                                           0
                                               0
                                                            0
Reduced Vol: 158
               11
                                        316
                   261
                         11
                             0
                                  0
                                       0
                                              219
                                                  225
                                                      323
                                                            11
PCE Adj:
          1.00 1.00
                  1.00 1.00 1.00
                               1.00
                                    1.00 1.00
                                                          1.00
                                             1.00
                                                 1.00 1.00
MLF Adj:
          1.00 1.00
                  1.00
                       1.00 1.00
                               1.00
                                    1.00 1.00
                                             1.00
                                                  1.00 1.00
FinalVolume: 158
               11
                   261
                         11
                             0
                                  0
                                       0 316
                                              219
                                                  225 323
Saturation Flow Module:
Sat/Lane:
          1700
                                                  1700 1700 1700
Adjustment: 1.00 1.00
                  1.00 1.00 1.00
                               1.00 1.00 1.00
                                             1.00
                                                  1.00 1.00
                  1.00 1.00 0.00 0.00 1.00 1.18
          0.93 0.07
                                             0.82
                                                  1.00 0.97 0.03
Lanes:
         1589 111 1700 1700
                           0
                               0 1700 2008 1392
Final Sat.:
                                                 1700 1644
Capacity Analysis Module:
                                    0.00 0.16
Vol/Sat:
          0.10 0.10 0.15
                       0.01 0.00 0.00
                                             0.16
                                                  0.13 0.20 0.20
                  ****
                                                  ***
Crit Moves:
Green/Cycle: 0.33 0.33
                  0.33
                       0.33 0.00
                               0.00
                                    0.00 0.34
                                             0.34
                                                  0.28 0.62 0.62
                               0.00
Volume/Cap: 0.30 0.30
                  0.47
                       0.02 0.00
                                    0.00 0.47
                                             0.47
                                                  0.47 0.32
                                                         0.32
          25.3 25.3
                  27.2
                       22.7 0.0
Delay/Veh:
                               0.0
                                     0.0 26.4
                                             26.4
                                                  30.3
                                                      9.1
                                             1.00
User DelAdj: 1.00 1.00
                  1.00
                       1.00 1.00
                               1.00 1.00 1.00
                                                 1.00 1.00
                                                         1.00
AdjDel/Veh: 25.3 25.3
                  27.2
                       22.7 0.0
                                0.0
                                     0.0 26.4
                                             26.4
                                                  30.3
                    С
LOS by Move:
            C
                С
                         С
                             Α
                                  Α
                                       Α
                                           C
                                               С
                                                    С
                                                        Α
                     7
                         0
                                 0
***********************************
Note: Queue reported is the number of cars per lane.
***********************************
```

```
Cumulative (2020) + ProjectWed Jan 7, 2009 09:49:35
                                                    Page 15-1
_______
              Huntington Beach Traffic Impact Analysis
        Cumulative (2020) + Project PM Alt 2 with cross traffic
                Level Of Service Computation Report
         2000 HCM Operations Method (Future Volume Alternative)
********************
Intersection #24 Beach Blvd / Pacific View Ave
*************************
Cycle (sec):
                100
                              Critical Vol./Cap.(X):
Loss Time (sec):
               5 (Y+R=4.0 sec) Average Delay (sec/veh):
                                                       12.2
                20
                              Level Of Service:
Optimal Cycle:
**********************
             Beach Blvd
Street Name:
                                          Pacific View Ave
                       South Bound
                                     East Bound
Approach:
          North Bound
                                                   West Bound
                      L - T - R \qquad L - T - R
          L - T - R
                                                 L - T - R
Movement:
-----||-----||-----|
            Protected
                        Protected
                                      Protected
                                                   Protected
Control:
             Include
                          Include
                                        Include
                                                     Include
Rights:
Min. Green:
            0 0 0
                         0 0 0
                                      0
                                        0
                                              0
                                                   0
                                                     0
          1 0 3 0 0
                       1 0 2 1 0
                                    1 0 0 0 1
                                                 0 0 0 0 0
-----||-----||-----||------|
Volume Module:
           45 1201
                   0
                         0 675
                                161
                                    190
                                          0
                                              45
                                                   0
Base Vol:
                      1.00 1.00
                               1.00 1.00 1.00
Growth Adj:
         1.00 1.00 1.00
                                            1.00
                                                 1.00 1.00
                                161
Initial Bse:
           45 1201
                    0
                         0
                           675
                                    190
                                              45
                                                   0
Added Vol:
            0
                0
                    0
                         0
                             0
                                 0
                                      Ω
                                          0
                                               0
                                                   Ω
                                                       Ω
                                                            Ω
            0
                0
                    0
                         0
                             0
                                 0
                                      0
                                          0
                                               0
                                                   0
                                                       0
PasserByVol:
                    0
                         0 675
                                    190
                                          0
                                              45
                                                       0
Initial Fut:
           45 1201
                                161
                                                   0
                      1.00 1.00
                              1.00
                                    1.00 1.00 1.00
                                                 1.00 1.00
User Adj:
          1.00 1.00 1.00
          1.00 1.00
                       1.00 1.00
                               1.00
                                    1.00 1.00
                                            1.00
                                                 1.00 1.00
PHF Adj:
                  1.00
PHF Volume:
           45 1201
                    0
                         0
                           675
                                161
                                     190
                                         Ω
                                              45
                                                   0
Reduct Vol:
           0
                    0
                         0
                             0
                                 Ω
                                          0
                                              0
                                                       Ω
                Ω
                                      0
                           675
                                              45
Reduced Vol:
           45 1201
                    0
                         0
                                161
                                    190
                                          0
                      1.00 1.00
                               1.00 1.00 1.00
                                            1.00
                                                 1.00 1.00
PCE Adj:
          1.00 1.00
                  1.00
                                                         1.00
                              1.00 1.00 1.00
                                            1.00
                                                 1.00 1.00
MLF Adj:
          1.00 1.00 1.00 1.00 1.00
                         0 675
                                161
                                    190
                                              45
                                                   0
FinalVolume: 45 1201
                   0
                                          0
-----||-----||-----|
Saturation Flow Module:
         1700 1700 1700
Sat/Lane:
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00
                                            1.00 1.00 1.00
                                                         1.00
          1.00 3.00 0.00 1.00 2.42 0.58 1.00 0.00
                                            1.00
                                                 0.00 0.00
Lanes:
                  0 1700 4118
                               982 1700 0 1700
Final Sat.: 1700 5100
                                                   0
Capacity Analysis Module:
                               0.16 0.11 0.00 0.03
Vol/Sat:
          0.03 0.24 0.00
                       0.00 0.16
                                                0.00 0.00 0.00
                                    ****
             ***
                       ***
Crit Moves:
Green/Cycle: 0.09 0.64 0.00 0.00 0.55 0.55
                                    0.31 0.00
                                            0.31
                                                 0.00 0.00
                                                         0.00
Volume/Cap: 0.30 0.37
                  0.00
                       0.00 0.30
                              0.30
                                    0.37 0.00
                                            0.09
                                                 0.00 0.00
                                                         0.00
          43.7 8.3
                  0.0
                       0.0 11.9 11.9
                                    27.6 0.0
                                            24.8
                                                 0.0 0.0
Delay/Veh:
                                                          0.0
User DelAdj: 1.00 1.00
                 1.00
                      1.00 1.00
                              1.00
                                    1.00 1.00
                                            1.00
                                                 1.00 1.00
                                                         1.00
AdjDel/Veh: 43.7 8.3
                   0.0
                       0.0 11.9
                               11.9
                                    27.6 0.0
                                            24.8
                                                  0.0 0.0
                                                          0.0
                                В
                                      С
                                              С
LOS by Move:
           D
                Α
                    Α
                         Α
                             В
                                          Α
                                                   Α
                                                       Α
                             5
                                 5
                                      5
                                          0
HCM2kAvq0:
            2
               6
                    0
                         0
                                               1
*************************
Note: Queue reported is the number of cars per lane.
*************************
```

CUMULATIVE (2020) WITH PROJECT WITH ALTERNATIVE 2 CONDITIONS

(ICU METHODOLOGY)

Cumulative (2020) + ProjectTue Jan 6, 2009 12:20:09

Huntington Beach Traffic Impact Analysis
Cumulative (2020) + Project AM Alt with cross traffic

Scenario Report

Scenario: Cumulative (2020) + Project AM (Alt 2 w/cross)

Command: Cumulative (2020) + Project AM (Alt 2 w/cross)
Volume: Cumulative (2020) + Project (Alt 2 w/cross AM)

Geometry: General Plan Build-Out

Impact Fee: Default Impact Fee

Trip Generation: None Trip Distribution: None

Paths: Default Path Routes: Default Route

Configuration: Existing

Page 2-1

Huntington Beach Traffic Impact Analysis Cumulative (2020) + Project AM Alt with cross traffic

Intersection		Base	Future	Change	
		Del/ V/	Del/ V/	in	
		LOS Veh C	LOS Veh C		
#	5 Pacific Coast Hwy / 9th St	B xxxxx 0.617	B xxxxx 0.617	+ 0.000 V/C	
#	6 Pacific Coast Hwy / 6th St	D xxxxx 0.825	D xxxxx 0.825	+ 0.000 V/C	
#	7 Pacific Coast Hwy / Main St	B xxxxx 0.671	B xxxxx 0.671	+ 0.000 V/C	
#	8 Pacific Coast Hwy / 1st St	F xxxxx 1.006	F xxxxx 1.006	+ 0.000 V/C	
#	9 Pacific Coast Hwy / Huntington	B xxxxx 0.684	B xxxxx 0.684	+ 0.000 V/C	
#	16 Main St / Adams Ave	A xxxxx 0.547	A xxxxx 0.547	+ 0.000 V/C	
#	19 Main St / 6th St	A xxxxx 0.345	A xxxxx 0.345	+ 0.000 V/C	
#	22 1st St / Orange Ave & Atlanta	A xxxxx 0.364	A xxxxx 0.364	+ 0.000 V/C	
#	24 Beach Blvd / Pacific View Ave	A xxxxx 0.336	A xxxxx 0.336	+ 0.000 V/C	

Appendix F, Traffic Impact Analysis - page 513 City of Huntington Beach - DTSP Update Program Environmental Impact Report Cumulative (2020) + ProjectTue Jan 6, 2009 12:21:18

Huntington Beach Traffic Impact Analysis
Cumulative (2020) + Project PM Alt 2 with cross traffic

Scenario Report

Scenario: Cumulative (2020) + Project PM (Alt 2 w/cross)

Command: Cumulative (2020) + Project PM (Alt 2 w/cross)
Volume: Cumulative (2020) + Project (Alt 2 w/cross PM)

Geometry: General Plan Build-Out Impact Fee: Default Impact Fee

Trip Generation: None Trip Distribution: None

Paths: Default Path Routes: Default Route

Configuration: Existing

Cumulative (2020) + ProjectTue Jan 6, 2009 12:21:19

Page 2-1

Huntington Beach Traffic Impact Analysis
Cumulative (2020) + Project PM Alt 2 with cross traffic

Intersection	Base Del/ V/	Future Del/ V/	Change in	
# 5 Pacific Coast Hwy / 9th St	LOS Veh C B xxxxx 0.672	LOS Veh C B xxxxx 0.672	+ 0.000 V/C	
# 6 Pacific Coast Hwy / 6th St	F xxxxx 1.021	F xxxxx 1.021	+ 0.000 V/C	
# 7 Pacific Coast Hwy / Main St	B xxxxx 0.640	B xxxxx 0.640	+ 0.000 V/C	
# 8 Pacific Coast Hwy / 1st St	F xxxxx 1.151	F xxxxx 1.151	+ 0.000 V/C	
# 9 Pacific Coast Hwy / Huntington	C xxxxx 0.768	C xxxxx 0.768	+ 0.000 V/C	
# 16 Main St / Adams Ave	C xxxxx 0.762	C xxxxx 0.762	+ 0.000 V/C	
# 19 Main St / 6th St	A xxxxx 0.468	A xxxxx 0.468	+ 0.000 V/C	
# 22 1st St / Orange Ave & Atlanta	A xxxxx 0.500	A xxxxx 0.500	+ 0.000 V/C	
# 24 Beach Blvd / Pacific View Ave	A xxxxx 0.397	A xxxxx 0.397	+ 0.000 V/C	